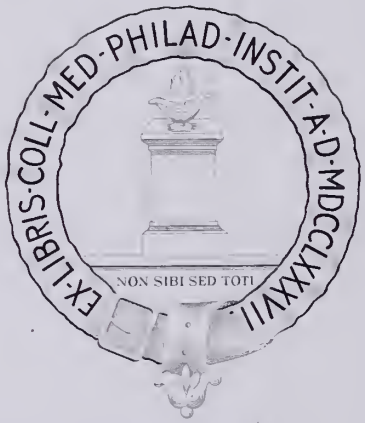
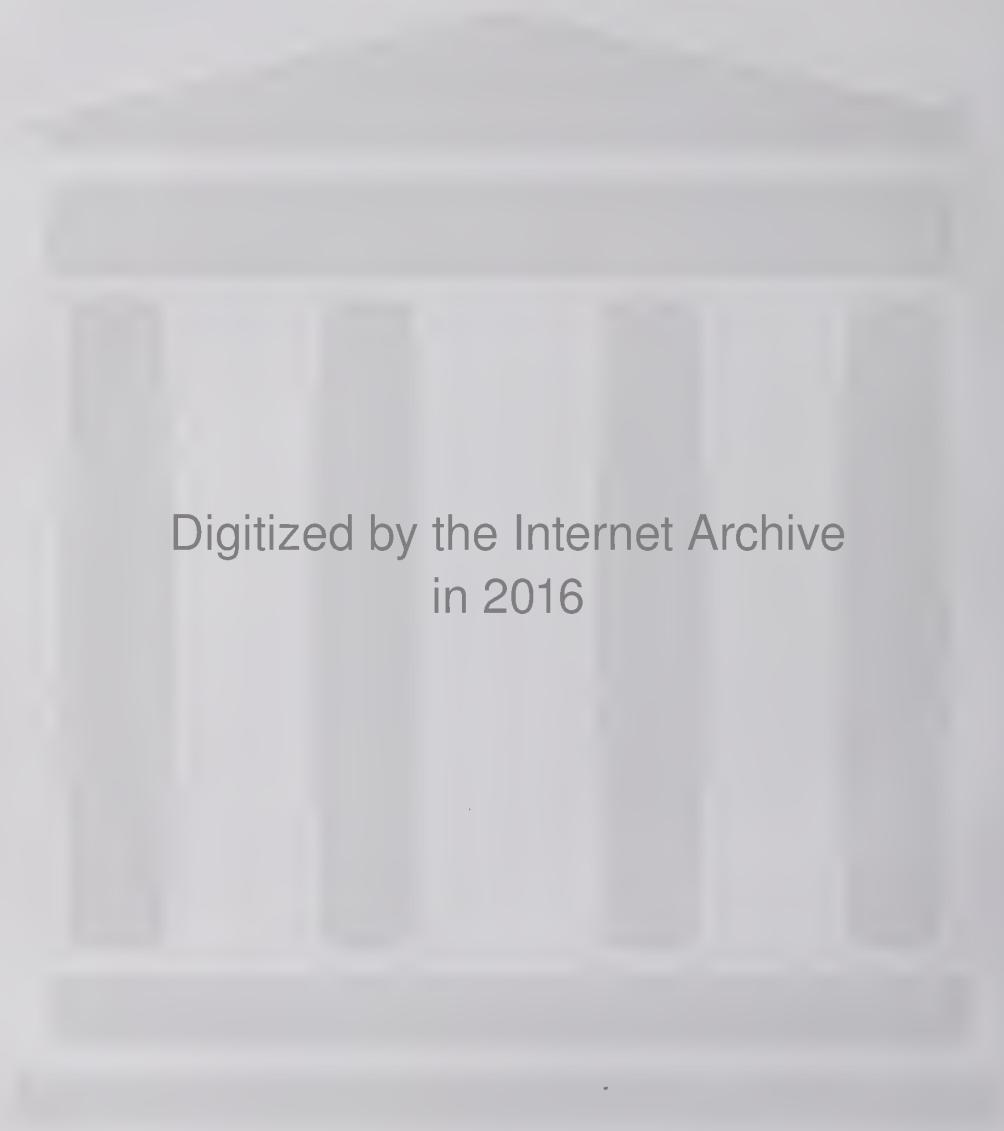
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JULY 1977

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Of The Medical Association Of The State Of Alabama

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A character all its own.



Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

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Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

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2-mg, 5-mg, 10-mg scored tablets

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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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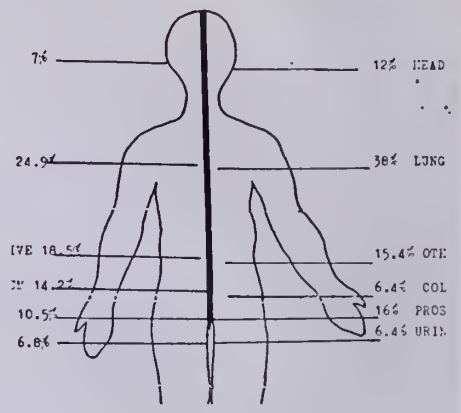
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*At Large

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Ira L. Myers . . . . . Montgomery

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Public Law No. 93-641 is the legal mechanism for dividing Alabama into basically six Health Service Areas for planning purposes. Within each of these areas, a Health Systems Agency (HSA) has been established to, among other things, develop a Health Systems Plan. In establishing this Plan, the Health Systems Agency is charged with the responsibility to review and approve or disapprove applications for Federal funds for health programs; the review of capital expenditures proposed by health care facilities; to determine the need for new institutional and health services; and to annually recommend to states projects for modernizing, constructing and converting health facilities within each Area. These are but a few of the areas in which the Government is steadily moving in an organized effort to determine policy in the health care field.

Being charged with such awesome responsibilities, it would seem logical that these HSA's would be dominated by the experts in health care—the physicians. However, this same law mandates that a majority of the governing body of HSA's must be consumers and the remainder providers. A physician is considered but one of a number of providers.

Being relegated to a minority position on the governing body makes it even more imperative for each physician to take an active part in the development of the Plan. Now is your chance to make your views known and to represent medicine as only you, the practicing physician, are qualified to do. If you are too busy to donate your time to assist in the development of this Plan, rest assured that a consumer or a Government bureaucrat will be glad to develop the Health Systems Plan for you. Get involved in the planning process—it could be your last chance to retain control of your profession. Remember, if you don't plan for yourself, the Government will plan for you. ●

WHAT DO YOU THINK OF THE JOURNAL?

Let us know . . .

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INFORMATION FOR AUTHORS CONCERNING MANUSCRIPTS

Manuscripts should be typewritten, double spaced on white paper 8½ x 11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain in the order given: Name of author, title of article, name of periodicals with volume, page, month — day of month if weekly — and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

Length Of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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ABOUT THE COVER

This month's cover: MASA delegates to the AMA convention in San Francisco are caught deep in contemplation. Left to right, Paul W. Burleson, M.D., Birmingham; Orizaba Emfinger, M.D., Union Springs; and William E. White, M.D., Anniston. The delegates' report will be found on page 10. For a spirited controversy over the future of medicine and government at the convention, see the texts of speeches by HEW Secretary Califano and AMA President Palmer beginning on page 48.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

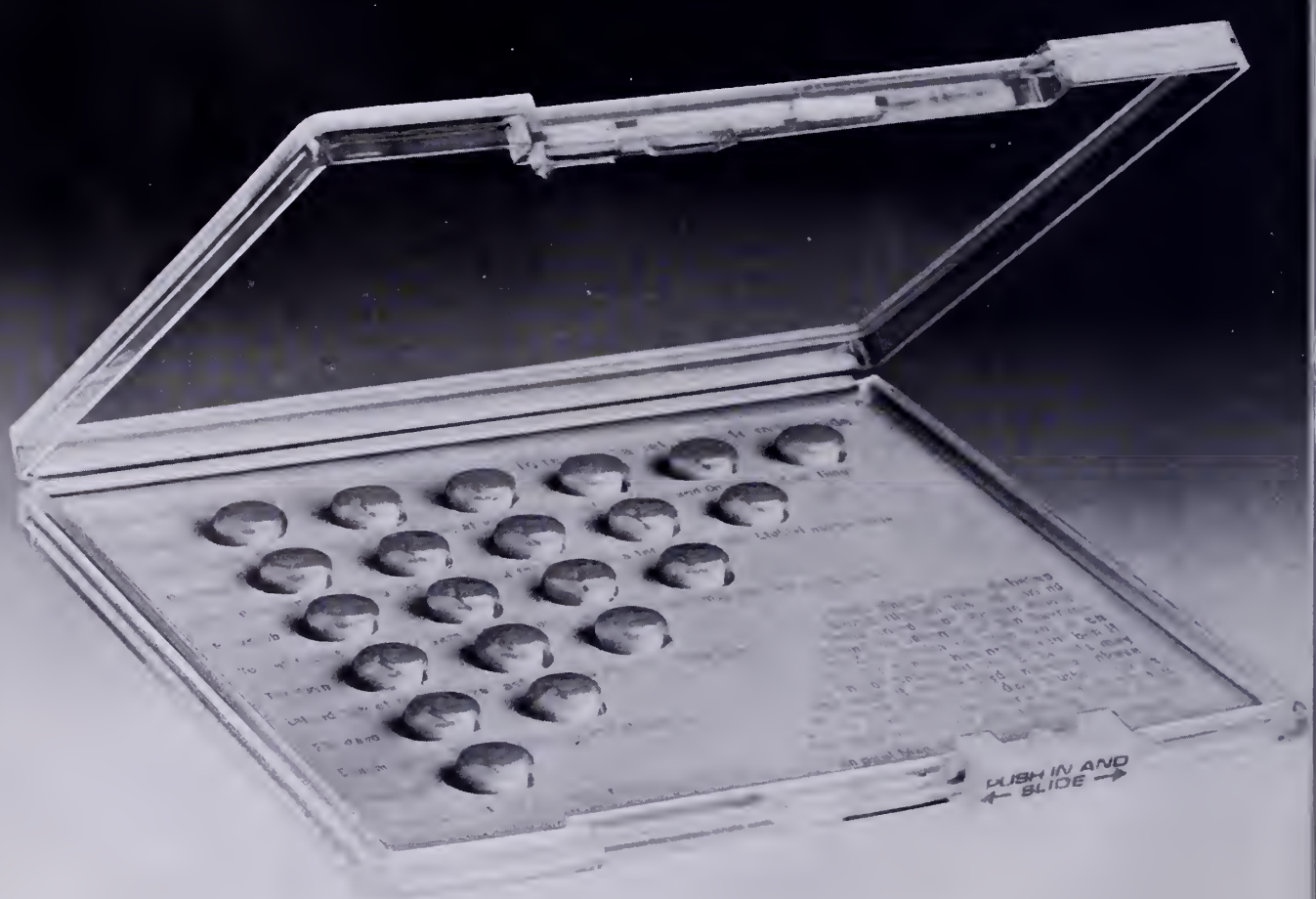
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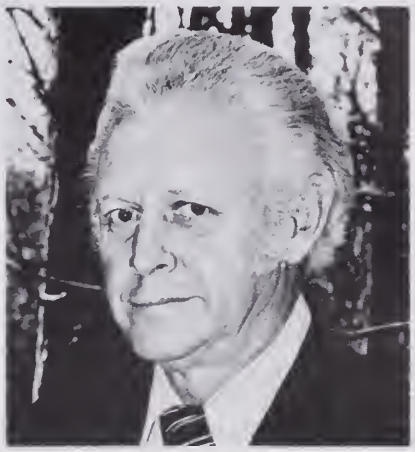


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The Disabled Physician



A Physician's Physician

Being a physician is a joy and a pleasure for most of us, but what happens when it gradually or suddenly becomes an agonizing and painful role?

What happens when we begin to realize that we are losing the motor skills, the physical stamina, the enthusiasm for "keeping up" for which we as individuals have gained satisfaction or fame?

What happens when we recognize that our devotion to our practice has resulted in tragedy in our families? What happens when our hard-earned savings have been decimated by poor judgments in investments?

What happens when a distorted physician's mind begins to lose contact with reality or accepts perverted behavior as a liberated crusade against the shackles of conformity? What then?

These questions have been and continue to be a matter of great concern for your officers. We recognize that stresses such as these are frequently the beginning of physician behavior which lead to serious malpractice suits, suspension or revocation of the license to practice medicine and, most serious of all, the end to a productive and happy career.

Current studies would indicate that 5-7% of physicians are decompensated to a significant degree by the triad of:

(1) Chemical dependency on drugs and alcohol.

(2) Disability due to physical and emotional illness.

(3) Culpable behavior, antisocial and illegal acts.

The will to identify physicians who are beginning the downward spiral into disaster and knowing how best to be of help can be learned, and the sources of definitive care can be publicized but it must be understood that this must be a volunteer and largely anonymous group of physicians and wives who are willing to devote time and energy to the rehabilitation of troubled physicians and their families.

The companion problem of reducing the risks of malpractice can and must also be learned for the fate of the physician-owned professional liability company, the Mutual Assurance Society, depends on physicians helping physicians.

The non-coercive course of helping is the appropriate and humane way to deal with the problems early; the coercive or the legal resource is the necessary course when a physician's behavior places the lives of his patients in imminent danger.

Many of you have received letters requesting your perception of what the problems are in your community or county. Please answer these promptly. Remember, no names! You will hear more about this program later this summer. I welcome your comments and assistance. ●



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Letters to the Editor

Puzzled And Disturbed

Dear Sirs:

As I am only one American citizen and have been all of my life, I have only one question to ask someone: What has gone wrong with our good medical doctors today? Even victims of emergencies are turned away on account that they have no money or no insurance cards.

On May 13, 1977, my husband, Ewell Ratliff, my uncle, Bob Keating, and I were in an automobile accident on Highway 25. All three were checked over at the Shelby County Memorial Hospital, Alabaster, and my husband and uncle were sent home. I was really banged up. The man who made my X-rays said the machine was out of order.

Dr. McCoy from Bessemer was called in to sew up my head. Two of the staff physicians at Shelby County Memorial Hospital refused to do the work because I had no money or insurance card to present at that particular time.

I have a hospital insurance card and I was supposed to have an appointment at the hospital on Monday, May 16. I was there four hours. They found no charts for me then.

What will become of poor folks when in need of help by doctors and hospitals? I evidently misplaced my hospital card, but I have always carried it with me. I was very embarrassed and disturbed over the actions that took place.

Trudie Ratliff
Rt. 1, Box 35
Sterrett, Alabama

List Scientific References

Dear Dr. Smith:

I would like to suggest that references be included in all articles of the journal. It is reasonable to assume that we wish for serious reading of the materials published. The "references available upon request" can hardly be regarded as uplifting the quality of the journal or the interest of a reader.

Sincerely,
Wladimir Wertelecki, M.D.
Chairman, Professor
Dept. of Medical Genetics
University of South Alabama
College of Medicine
Mobile, Alabama

WHAT DO YOU THINK OF THE JOURNAL?
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History of MASA

Dear Sir:

Could you please tell me whether or not there is a published history of the Medical Association of the State of Alabama? I am working on a history of American Medicine and have a need of information on a more local level than is usually available in most journals. If there is such a publication available, I would like to purchase a copy.

Sincerely yours,
Jno D. Randall
Dept. of Neurological Surgery
The George Washington University Medical Center
Washington, D.C.

(EDITOR'S NOTE: Copies of the history of The Medical Association of The State of Alabama, as written by the late Dr. Douglas L. Cannon, are available upon your request to MASA's Department of Communications. Dr. Cannon's history appeared in the January-April, 1977 issues of the JOURNAL.) ●

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Report Of The Alabama Delegates To The 126th Annual Convention Of The American Medical Association

June 18 - 23, 1977
San Francisco, California

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Paul W. Burleson, M.D.
Birmingham

O. Emfinger, M.D.
Union Springs

W. E. White, M.D.
Anniston

ALTERNATES

E. B. Glenn, M.D.
Birmingham

Alfred Habeeb, M.D.
Birmingham

Julius Michaelson, M.D.
Foley

TO: Members Of The Medical Association Of The State Of Alabama
SUBJECT: Report Of The 126th Annual Convention Of The American Medical Association

The Alabama contingent was composed of its three delegates and alternate delegates along with President John Rice, and MASA President-elect Hiliary Henderson. They were supported by staff members Mr. Lon Conner, MASA Executive Director, George Oetting, Educational Director, and Mr. Wallie Carpenter, Jefferson County Medical Society Executive Secretary, who was attending the meeting.

Individual assignments were made by the chairman for each member of the Alabama group to attend and monitor the nine reference committees, which were held beginning on Monday, June 20, at the Fairmont Hotel, headquarters hotel for the House of Delegates. On Tuesday and Wednesday mornings, breakfast caucuses were held by the Alabama group to discuss reports of the reference committees.

The House of Delegates convened initially on Sunday, June 19, at which time Secretary of HEW Joseph Califano spoke to the convention. He was followed by Theodore Cooper, former Assistant Secretary of Health for HEW. Dr. Richard Palmer gave his presidential address on the subject "Rationed Care, Rationed Professionalism." Reference committee meetings were held on Monday. The House reconvened on Tuesday to take up individually and to discuss and debate each report. Wednesday, the House continued its business reports until noon; in the afternoon, nominations for elective offices were held.

At 5 p.m., Dr. John Budd, of Cleveland, Ohio, was inaugurated as President of the American Medical Association for 1977-1978. A Presidential Reception followed in the Grand Ballroom of the Fairmont Hotel.

Thursday morning, elections were held. Dr. Tom Nesbitt, of Nashville, Tennessee, former speaker of the House of Delegates, was elected President-elect of the American Medical Association by acclamation. Dr. William Rial, of Swarthmore, Pennsylvania, former Vice Speaker of the House, was elevated to the job of Speaker of the House. Dr. Harrison Rogers Jr., of Atlanta, Georgia, was elected Vice Speaker of the House.

Drs. Daniel Cloud, of Phoenix, Arizona, and Hoyt Gardner, of Louisville, Kentucky, were re-elected to the Board of Trustees. Drs. Tom Ballantine, of Boston, Massachusetts, George Mills, of Honolulu, Hawaii, and Max Cole, of Dallas, Texas, were elected new members of the Board of Trustees.

Various AMA Councils of the House of Delegates held elections. Members of the Alabama delegation strongly supported Dr. Paul Burleson for re-election for a third term to the Council on Medical Service and were disappointed when he was defeated by another delegate from Illinois.

The California Medical Association, who hosted the convention, did an outstanding job and were highly commended for their efforts.

Respectfully submitted,

Paul W. Burleson, M.D., Chairman

Orizaba Emfinger, M.D.

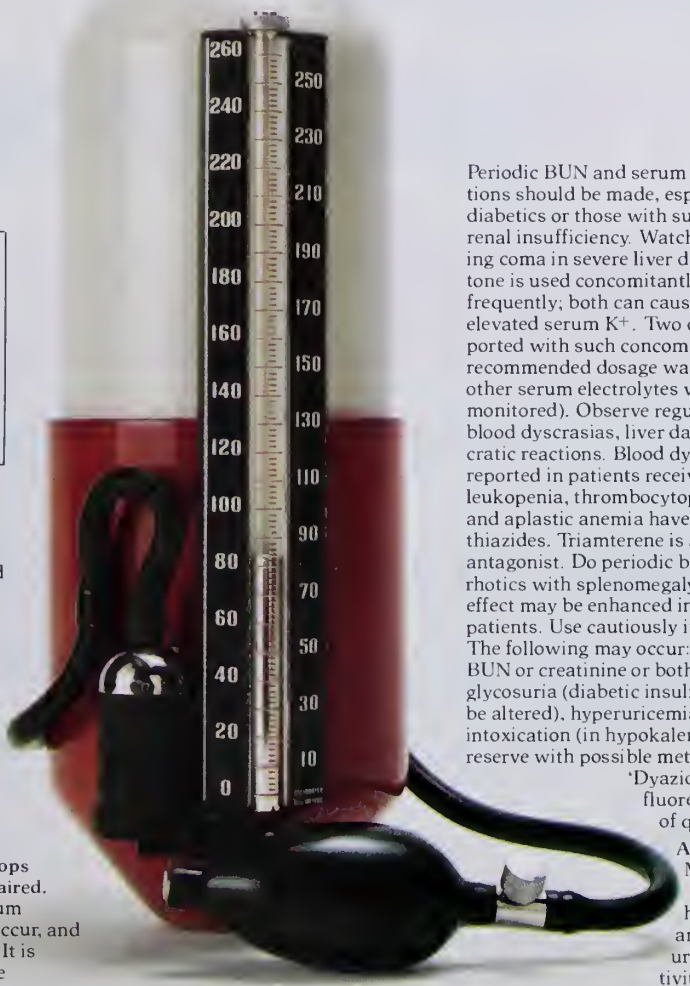
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* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis.

'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

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ew Gantanol® DS (sulfamethoxazole) tabts offer even greater convenience and conomy for your patients with acute, onobstructed cystitis due to susceptible rains of *E. coli, Klebsiella-Aerobacter,* aphylococcus, *Proteus mirabilis* and, ss frequently, *Proteus vulgaris*...
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Gantanol is contraindicated during pregnancy, during the nursing period, and in infants under 2 months. During therapy, maintain adequate fluid intake, perform frequent CBC's and urinalyses with careful microscopic examination.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

and economy

efore prescribing, please consult complete product formation, a summary of which follows:

dications: Acute, recurrent or chronic urinary tract infecns (primarily pyelonephritis, pyelitis and cystitis) due to sceptible organisms (usually *E. coli, Klebsiella-Aerobacter,* aphylococcus, *Proteus mirabilis* and, less frequently, *oteus vulgaris*), in the absence of obstructive uropathy or eign bodies. Note: Carefully coordinate *in vitro* sulnamide sensitivity tests with bacteriologic and clinical sponse; add aminobenzoic acid to follow-up culture edia. The increasing frequency of resistant organisms nits the usefulness of antibacterials including sulnamides, especially in chronic or recurrent urinary tract ections. Measure sulfonamide blood levels as variations ay occur; 20 mg/100 ml should be maximum total level.

ntraindications: Sulfonamide hypersensitivity; pregncy at term and during nursing period; infants less than o months of age.

arnings: Safety during pregnancy has not been estabhed. Sulfonamides should not be used for group A ta-hemolytic streptococcal infections and will not eradite or prevent sequelae (rheumatic fever, glomerulonritis) of such infections. Deaths from hypersensitivity reacns, agranulocytosis, aplastic anemia and other blood scrasias have been reported and early clinical signs ore throat, fever, pallor, purpura or jaundice) may indite serious blood disorders. Frequent CBC and urinalysis th microscopic examination are recommended during lfonamide therapy. Insufficient data on children under with chronic renal disease.

ecautions: Use cautiously in patients with impaired renal hepatic function, severe allergy, bronchial asthma; in glose-6-phosphate dehydrogenase-deficient individuals in om dose-related hemolysis may occur. Maintain adeiate fluid intake to prevent crystalluria and stone formation.

dverse Reactions: *Blood dyscrasias* (agranulocytosis, plastic anemia, thrombocytopenia, leukopenia, hemolytic emia, purpura, hypoprothrombinemia and methemoobinemia); *allergic reactions* (erythema multiforme, skin uptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis). *Usual adult dosage:* 2 Gm (2 DS tabs or 4 tabs or 4 teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: DS (double strength) tablets, 1 Gm sulfamethoxazole; Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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DEAN'S REPORT

by
Herschel P. Bentley, Jr., M.D., Chairman,
Department of Pediatrics
and
Robert A. Kreisberg, M.D., Dean,
University of South Alabama
College of Medicine

Innovative Teaching Programs In Pediatrics

Pediatrics is primarily an outpatient medical specialty. However, for many years pediatric resident and medical student education was concentrated on inpatients and very little with outpatients. Truthfully, most clinic duty was regarded as a chore to be finished as soon as possible. Through the past several years, pediatric education has gradually become more realistic with ambulatory programs becoming major aspects of teaching programs. Logistically, this has been extremely difficult for many medical schools because of lack of proper outpatient clients. Many schools solved this problem by establishing clinics in inner city, low income areas with large volumes of patients who were unable to pay. However, this has had obvious drawbacks because of difficulty in establishing longitudinal care and having physician contact solely with patients from one social strata.

The Department of Pediatrics of the University of South Alabama has developed a rather unique ambulatory program both for medical students and pediatric resident physicians. This is built around extensive involvement of practicing pediatricians of the community as participating faculty members which allows students to be exposed to all types of problems from all social levels.

This College of Medicine was made possible partially because of the involvement of the physicians in this area. Because of this interest an excellent opportunity was available to develop a Department of Pediatrics which could utilize the practicing pediatricians as active faculty members and excellent role models. Utilizing this enthusiasm, the Department of Pediatrics, at the beginning of the first junior class, made the decision to place all of its junior medical student ambulatory teaching programs in the offices of pediatricians who had appointments on the faculty and none in the hospital clinics. This offered the student a chance to see patients cared for in the atmosphere designed to give optimal, efficient care to a child as an individual and an opportunity to see early presentations of common diseases. More importantly, it also gave the students exposure to physicians who were dedicated to giving care to a child to the best of their ability regardless of time of day or day of the week. After three years experience, we have been gratified to find that the placing of junior students in private office practice has been a great success. It has accomplished what we had hoped with students being familiar with common diseases and thoroughly knowing development and nutrition.

To further expand this concept, the decision later was made to place the pediatric medical specialty clinics in the private offices. Initially, this was done with hematology/oncology but was soon expanded to include diabetes, allergy, chronic pulmonary and cystic fibrosis clinics with plans to eventually move the convulsive clinic and renal clinic to the private office setting. The resident physicians attend these clinics where patients are seen by appointment in an atmosphere of unhurried care and with heavy involvement of nurse practitioners, social workers, respiratory therapists and nutritionists. In such an atmosphere the broken appointments are essentially non-existent and allows the residents to have better follow-up and management of these patients.

The specialty clinics are established to function as they do in private practice situations. Patients referred to a specialty clinic are generally given their routine and acute care by the referring resident, not the specialty clinic. Thus, patients who are referred to a specialty clinic are given continuing supervision for their particular chronic problem by the subspecialist but are followed by the resident on consultation with the specialist, for all other problems. Exceptions to this are patients with leukemia, malignancies, cystic fibrosis, hemophilia, etc. When these patients' acute care problems are so linked with their particular illness then it is not good patient care to operate in any other manner. It definitely has enhanced teaching in the specialty clinics.

Prior to October 1976, the Department of Pediatrics operated a general children's medical outpatient clinic patterned fairly well after most general clinics. Patients were given appointments, but because of registration procedures, they had to be registered before 9:30 a.m. Thus, they were insured of waiting up to 2½ hours in a crowded waiting room with sick adults and exposure to all types of illnesses. Even in this situation, as much as possible, the patients were followed by the same pediatric resident. However, the clinic met only four one-half days per week which essentially obviated it for giving acute primary care. On October 1, 1976, the task of phasing out this general pediatric medical clinic in the university hospital was begun and by the end of November 1976, the clinic ceased to exist. To replace it, one of the pediatric faculty opened a private office one block away from the University of South Alabama Medical Center to receive all of the patients who had previously attended this clinic. In this office patients were seen by appointment everyday of the week except Sunday.

CONTINUED ON PAGE 16

This practice is operated both as a private practice and as a role model for the house staff. The resident physicians, under the direct supervision of a pediatric faculty member, see patients and follow their own patients on regularly scheduled visits.

Each resident physician has a group of patients whom they give continuing care. These patients are identified so that whomever is seeing that child during an acute illness will see that the child returns to the proper pediatric resident for continuing care.

Plans are currently underway to involve other professional disciplines more actively in this program and, thus, broaden the pediatric residents' educational experience for meeting common problems encountered in practice. Two major areas which are being actively planned are psychology and learning and behavior disorders. The Department of Psychology has agreed to participate wholeheartedly in this project and will regularly send a psychology team to these offices for psychological testing of patients who need this service. The pediatric resident physician will attend these testing programs on their patients. Patients who require further testing and therapy will be referred to the Department of Psychiatry.

The Mobile Mental Health Center operates an extensive program in learning disorders under the direction of Miss Kay Atkins. The personnel from this learning disorders program at Mobile Mental Health Center have agreed to establish a problem similar to the one in Psychology. On a regularly scheduled basis, personnel will travel to the pediatric ambulatory center to determine the best program available for each child who is having learning or behavior disorders. During these sessions, the residents can learn by observation at the same time that the child is getting excellent attention paid to his or her problem in the office of the pediatrician. The resident then has the opportunity to observe the child in behavior modification or to participate in formulating the plan for solving the learning disorder. Both of these testing and evaluation sessions focuses the resident's attention on the fact that he or she is the person who coordinates the solution to the child's problems concerning mental or physical health.

The outpatient services thus have all been moved to private offices. These patients bridge every social strata and, thus, the residents are exposed to all forms of medical care economics and the current problems to be solved. The residents are taught the common illnesses as well as management of school problems, etc. By establishing such a program in the training years it is expected to void that hiatus in the knowledge of common problems which has previously existed in the early years of practice. The graduate pediatrician should learn how to manage the common problems of childhood during university training and not from the school of hard knocks. ●

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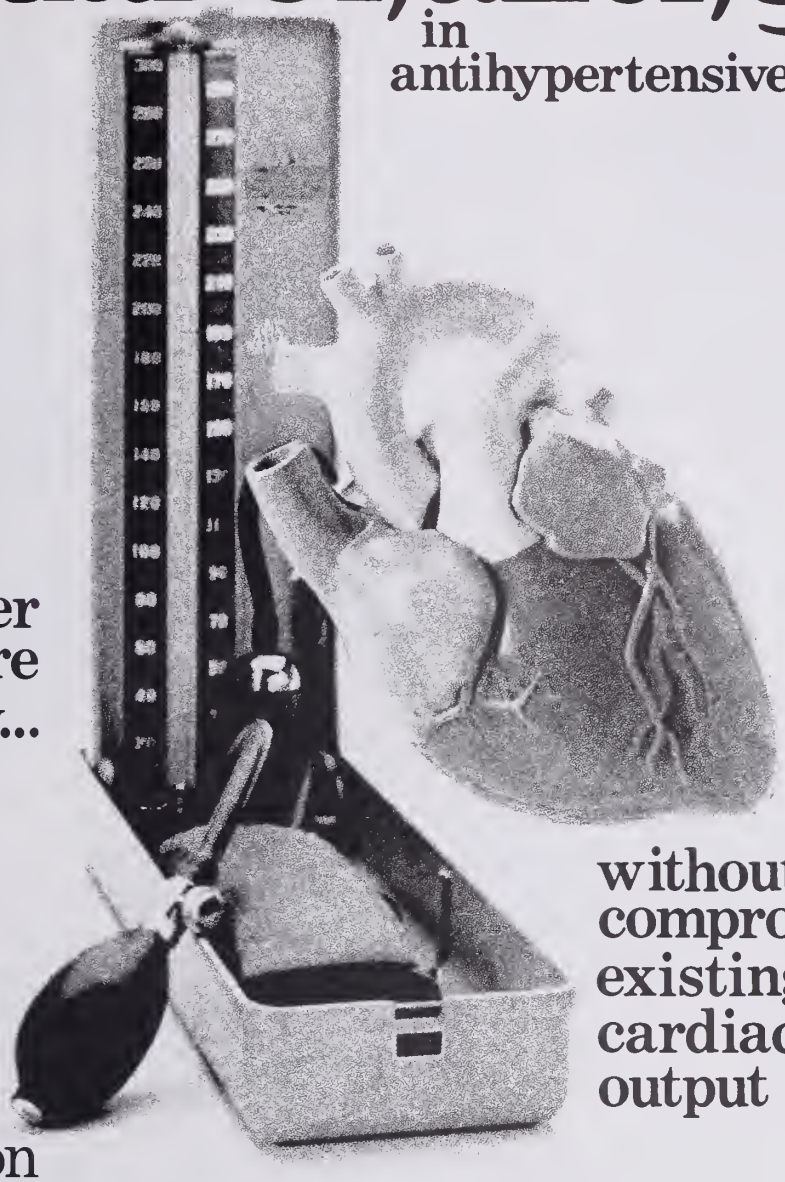
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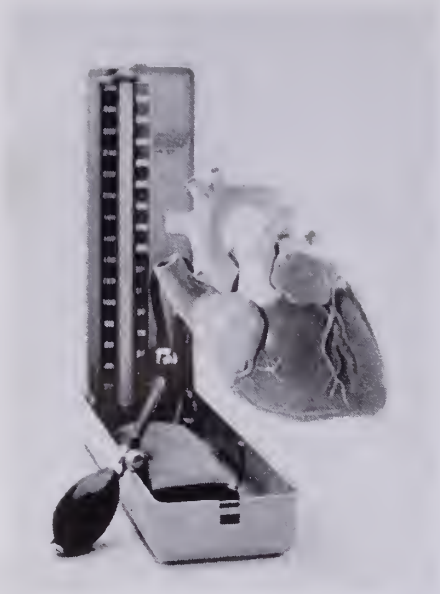
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ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

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Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

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Children who are dehydrated (due to fever, diarrhea or vomiting) are particularly prone to aspirin toxicity, even at therapeutic doses.[1a] This is of special concern in infants and young children where repeated therapeutic doses of aspirin can cause severe metabolic disturbances.[1b]

TYLENOL® acetaminophen products have not been associated with electrolyte imbalance or acid-base changes, and therefore are unlikely to produce such a toxic reaction, even in the dehydrated child.

And, equally important, numerous investigators have reported TYLENOL acetaminophen to be as effective as aspirin for relief of fever and pain.[1c, 2-6]

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Chewable tablets: 120 mg. acetaminophen
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Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. TYLENOL acetaminophen at recommended doses has rarely been found to produce any side effects.

References: 1. Goodman, L.S., and Gilman, A., eds.: The Pharmacological Basis of Therapeutics, Fifth Edition. New York, The Macmillan Company, 1975 (a) p. 335, (b) p. 336, (c) p. 344. **2.** Eden, A.M.: Am. J. Dis. Child. *114*:284-287 (Sept.) 1967. **3.** Mintz, A.A.: J. Ky. Acad. Gen. Pract. 5:26-31 (Jan.) 1959. **4.** Colgan, M.T., and Mintz, A.A.: J. Pediatr. *50*:552-555 (May) 1957. **5.** Saunders, D.C.: Practitioner *183*:335-338 (Sept.) 1959. **6.** Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryngol. *80*:214-217 (Aug.) 1964. © McN 1977

Avoids aspirin complications... and just as effective for fever and pain



McNEIL McNeil Laboratories, Inc., Fort Washington, Pa. 19034

11 ways to minimize the risk of professional liability suits

Most physicians don't malpractice. The major monies that are paid out are to patients dissatisfied with results of therapy or for permanent minor or major injuries received during the course of medical therapy.

Many "malpractice" suits against physicians have been initiated by patients improperly informed concerning the procedures to be carried out or the risks involved. Secondly, they have been brought because once the patient develops a complication the physician appears to be less than honest and acts in a secretive and "guilty" manner suggesting to the patient that the doctor is at fault. Thirdly, complications arise because physicians undertake procedures beyond their competence and also, once having a complication, hesitate to get early and adequate consultation.

Similarly, claims have been settled and suits lost even when no negligence occurred because advice concerning or recognition of patient problems was not documented in the medical record.

Other suits have been initiated by patients who have had complications or untoward incidents and who were later turned over to collection for a small residual bill.

What are the things an individual physician can do to decrease his risks of professional liability claims and suits? Here are eleven ways to avoid suits:

1. Know your abilities

Know your abilities and stay within your capabilities with willingness to refer or consult early and when needed.

2. Involve the patient

Involve the patient in treatment decisions, with adequate explanation of risks and possible complications. Avoid developing parent-child relationships with patients. Don't accept "You're the doctor, do what you think best." Such patients are escaping and want your omnipotent cure, but if things don't go well they also want you to have all the blame.

3. Second opinion

Give all patients having major surgery or serious diseases the opportunity of a second opinion and document it in the record. With any medical high-risk procedure or unusual procedure, i.e., hysterectomy in a woman who wants children, insist on a second opinion.

4. Be completely honest

If your patient develops complications or if there are untoward events, be completely honest, be aggressive in management and get early consultation, if indicated. Likewise, keep good records of the events and your advice to the patient and family.

5. Participate in CME

Participate in continuing medical education because a significant percentage of suits have been for misdiagnosis or failure to use a recent acceptable new form of therapy or diagnostic procedure.

6. Keep thoughts private

Keep your thoughts private concerning other physicians' capabilities or adequacy to manage a case. Especially don't discuss such cases at social affairs. Likewise, making a judgment as to whether some untoward event was malpractice, based upon inadequate hearsay evidence in the doctors' lounge, is a disservice to your colleagues as well as yourself. Any discussion held on such a topic should be considered in a positive way instead of a negative one. Discussion of other physicians' capabilities should be held only under appropriate circumstances.

7. Confront disgruntled patient

If you feel that a patient is disgruntled, confront him as soon as possible and discuss the apparent concerns. Try to settle differences as reasonably as possible. This will usually defuse the problem.

8. Beware of doctor shoppers

Patients who talk down every physician they have seen prior to you will probably put you in that same grouping in the near future. Be wary of "doctor shoppers." Encourage good doctor-patient relationships.

9. Notify carrier early

If you feel that an untoward incident or event is likely to cause a claim or suit notify your insurance carrier early. Sometimes their early intervention can head off an escalating chain of events and settle a problem with minimal expenditure of time and money. Insurance companies are doing more aggressive claims management, but to be most effective you need to notify them early.

10. Serve as patient advocate

If your patient has an untoward incident, such as injury caused by falling out of bed, serve as his advocate and approach the problem aggressively with the hospital administration to be sure the patient is cared for and financial differences settled before he leaves the institution.

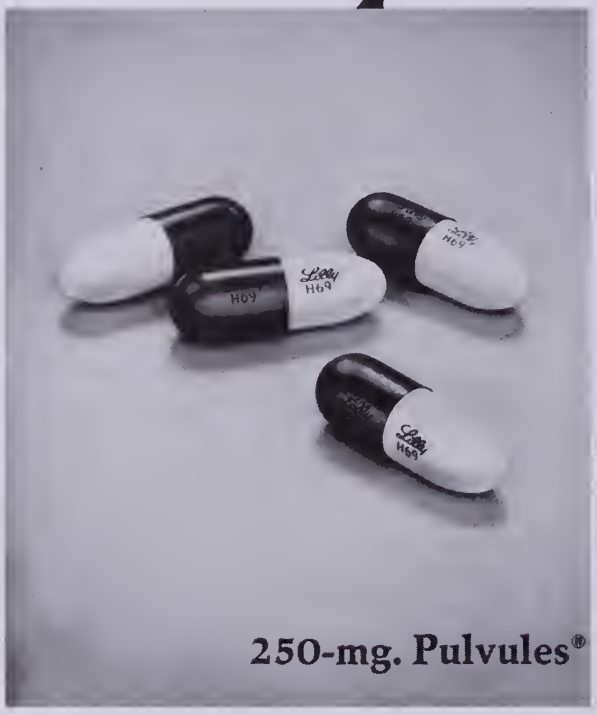
11. Establish "Incident Committee"

Encourage your hospital to establish an "incident/maloccurrence committee" from among the hospital medical staff to investigate all incidents and maloccurrences to make sure that the patient is helped in the most aggressive, concerned and sympathetic manner and to prevent similar occurrences in the future.

FINALLY, There is no substitute for care with caring. An honest, concerned, sympathetic attitude is your number one preventive measure—develop it.

This document was produced under auspices of the Ad Hoc Task Force on Professional Liability (Holger Rasmussen, M.D., Chairman) and the Public Relations Committee (John S. Derryberry, M.D., Chairman) of the American Academy of Family Physicians.

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Cancer Mortality At V.A. Hospital, Tuskegee, Alabama

by
T. Nagendran, M.B.B.S., F.R.C.S.(C), F.I.C.S.*
and
Emmit Chapital**

Cancer is the second most common cause of death in the United States males aged between 35 and 50 years.[1] A recent study reveals that Black males in this country have higher standardized incidence rates of cancer of the esophagus, stomach, pancreas and prostate than white males.[2] This study involves a brief analysis of cancer in Black and white males at Veterans Administration Hospital, Tuskegee, Alabama.

Materials and Methods

All deaths between 1970 and 1975 listing visceral cancer as cause of death were analyzed. Skin cancers, including melanoma, were excluded. The information was obtained from death certificates, Tumor Registry and the patients' charts. The relative incidence of various malignancies is presented. An attempt was made to assess the primary organ system failure leading to the death in these patients.

Results

There were 230 deaths for the six-year-period—153 Black males and 77 white males. Carcinoma of lung was the most common visceral malignancy. The relative incidence of other malignancies is given in Fig. 1, and has been compared with American Cancer Society statistics. Male veterans were found to have higher incidences of head and neck cancer and digestive tract cancer than males in general. The incidence of colon and rectal carcinoma was much less in the veteran population.

Fig. 2 describes the various relative incidences of malignancy in Black versus white male veterans. Carcinoma of the prostate was the most common visceral malignancy in Black male veterans, whereas in white veterans it was carcinoma of the lung. Blacks were found to have higher incidence of carcinoma of esophagus, stomach and hepatoma, whereas, whites had a higher incidence of lip and

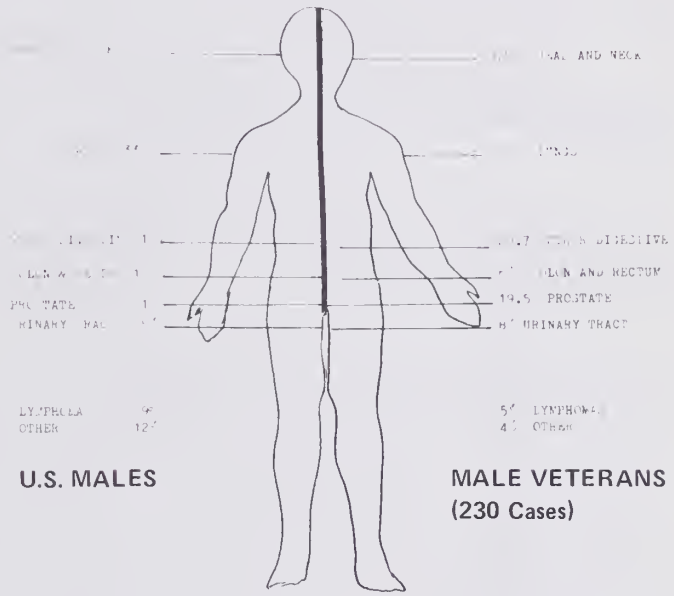


FIGURE 1. CANCER MORTALITY IN U.S. MALES VS. MALE VETERANS.

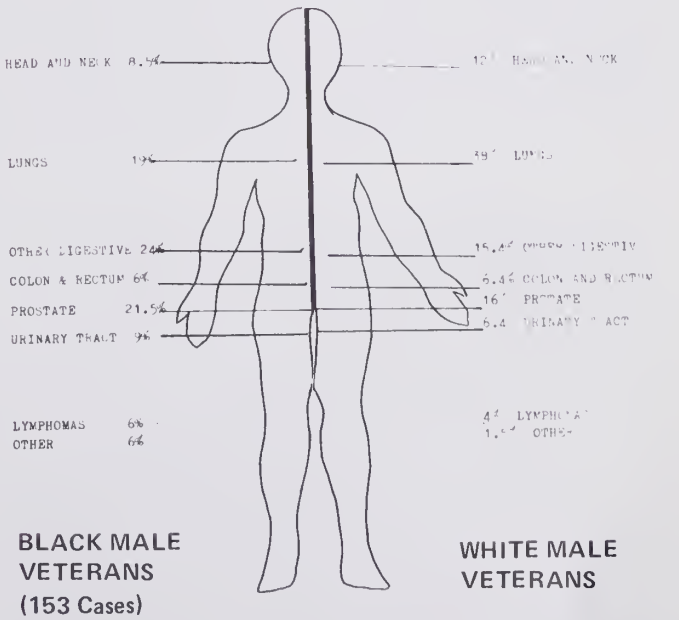


FIGURE 2. CANCER MORTALITY IN MALE VETERANS

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**Third-year Medical Student, Tulane University of Louisiana, New Orleans, Louisiana.

The authors' statements and conclusions are the results of their own studies and do not necessarily reflect the opinion of the Veterans Administration.

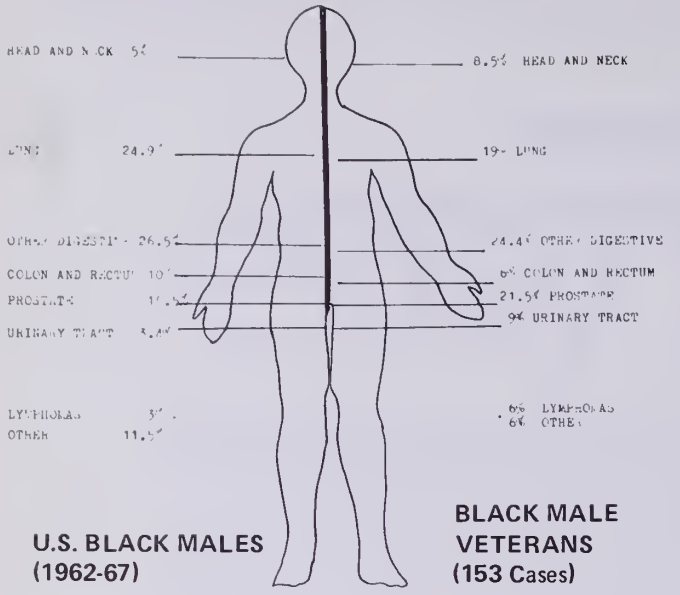


FIGURE 3. CANCER MORTALITY IN U.S. BLACK MALES VS. BLACK MALE VETERANS

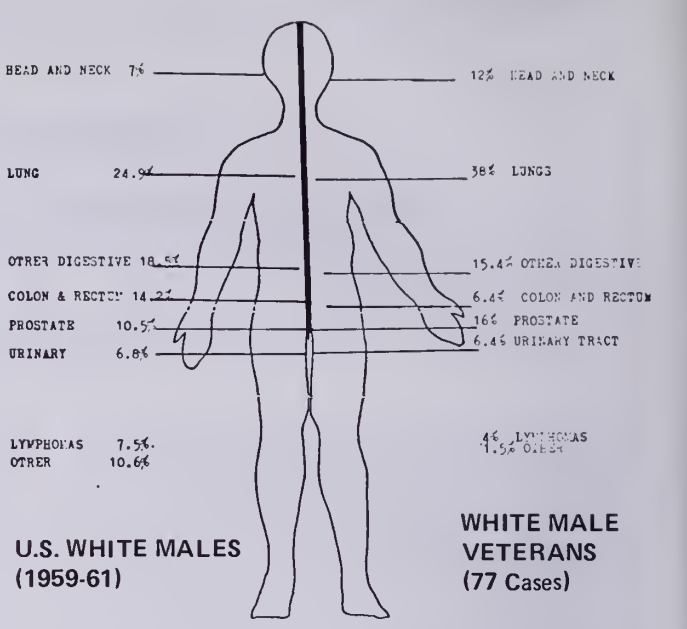


FIGURE 4. CANCER MORTALITY IN U.S. WHITE MALES VS. WHITE MALE VETERANS

TABLE 1. TOTAL NO. OF DEATHS: 230 CASES

ORGAN SYSTEM LEADING TO DEATH	LUNG (58)	PROSTATE (48)	G.I. (53)
RESPIRATORY SYSTEM	79%	25%	24.5%
CARDIOVASCULAR SYSTEM	6.8%	29%	5.6%
CEREBRAL NERVOUS SYSTEM	3.4%	10.4%	2%
LIVER	3.4%	____	10.9%
BONE MARROW	3.4%	8.3%	____
G. I.	____	____	50.9%
RENAL FAILURE	____	6.2%	____
UNKNOWN	3.4%	20.8%	____

colon and rectal cancer. Figs. 3 & 4 compare the cancer mortality in Black and white male veterans with U.S. Black and white males respectively.

Causes of Death

Table I gives the various organs system failure leading to death. G. I. and lung cancer deaths resulted directly from the failure of these organs, whereas, in prostate cancer, the majority of deaths resulted from non-related causes.

Conclusions

A brief analysis of cancer mortality among 230 male veterans has been presented. This has been compared with U. S. cancer mortality. ●

REFERENCES

1. Cancer Statistics, 1977; CA - A Cancer Journal for Clinicians, Vol. 27, No. 1, 1977
2. J. Kovi, et al: Incidence of Cancer in Negroes in Washington, D. C., and Selected African Cities, American Journal of Epidemiology, Vol. 96, pp 401, 1973
3. Fred Burbank, et al: U. S. Cancer Mortality: Non-White Predominence, Journal of the National Cancer Institute, Vol. 49, pp 654, 1972.
4. Abraham M. Lilienfeld: Cancer in the United States, Howard University Press, 1972.

The Indigenous Medicine And Psychiatry Of The Black American

HOODOO

BY RALPH R. KUNA*

In the growing volume of literature on transcultural psychiatric studies of indigenous healers, the "Hoodoo doctor" has been too long overlooked. The minimal amount of material about this type of folk healer reveals a failure to discriminate Hoodoo from other cultural systems of healing. The indigenous "Hoodoo doctor" should not be confused with the Voodoo priest-doctor. The former, a product a Black American culture, is quite common whereas the latter is rarely, if ever, found in the United States. In fact, the Hoodoo doctor is often shunned by the few Voodoo societies in the United States.

The present paper will attempt—with limited data—to adumbrate the actual distinction between the Hoodoo doctors and other indigenous healers and to clarify the healing aspects of the American Blacks' Hoodoo doctor in relation to the interaction of situational and psychological factors in the Black community.

Hoodoo as a Form of Folk Medicine and Psychotherapy

Hoodoo, as a system of native Black American folk psychotherapy and psychiatry, was defined by Hyatt (1935) as "a complex belief and practice involving almost every aspect of life...witchcraft or Hoodoo is a magic rite—whether acted out according to a formula or merely intended or wished—against someone's welfare" (p. 24). The core of this system, according to Hyatt, is "to catch a spirit, or to protect your spirit against the catching, or to release your caught spirit; this is the complete theory and practice of Hoodoo" (p. 361). Moreover, Hoodoo is flexible, amorphous, and constantly changing to suit changing times, conditions, and personalities.

A person can "lay" or "plant a root" for another—to "catch the spirit of another." The victim, however, is not entirely helpless. He can, with the proper guidance and help from a "root worker" or "root doctor," turn the spell or "trick" against the person initiating it. Once the Hoodoo doctor has performed this highly respected act, the "homing" principle returns the spell infallibly to the initiator. For guidance in such cases, one goes to a specialist who has made a study of these matters—the Hoodoo doctor.

Hoodoo doctors may be white—not necessarily Cajun—and Catholic or a member of any Christian denomination. They are, however, predominantly male. One may become a Hoodoo doctor in any one of three ways: (1) by being born with the gift, (2) by receiving the "call," or (3) by learning the profession from another, or serving an apprenticeship.

Hoodoo doctors have rather well-defined professional duties. These include (1) diagnosis, (2) finding out who "laid the trick," and (3) curing the patient by either destroying the trick or administering "roots" or "herbs" from a Hoodoo bag. There is no general agreement about which roots and herbs should be used. Hurston (1931) states that "Anything may be conjure, nothing may be conjure, according to the doctor, the time and the use of the article" (p. 411).

Hoodoo doctors are often distinguished from "root doctors" because the Hoodoo doctor's specialty is medicine. But some Hoodoo activities, usually known as signs, are felt to have little to do with the Hoodoo doctor. This accords with the distinctions between practitioners of medicine (Hoodoo) and those of magic (signs), where forms of sorcery may take place. Hoodoo doctors may also specialize and may have specialties ranging from warding off death to bringing it about.

The Hoodoo doctor is usually a respected but feared member of his community. He, like healers in the Euro-American tradition, has both medical and social power. As Young (1976) points out:

> The power of healers (diagnosticians as well as therapists) has two aspects, then. One is practical and the other is social. The first refers to power accumulated and controlled by the healer in order to compete with pathogenic agencies, so that he can produce a remission of symptoms. This aspect can be measured according to how powerful are the pathogenic agencies that must be countered (that is, the seriousness of the symptoms they produce and their ability to resist therapies), and how common these prophylactic, diagnostic, or therapeutic abilities are in a particular society. The social aspect of power refers to someone's ability to communicate and legitimize his choice of exculpating circumstances. This aspect of power can be measured according to the seriousness of the social consequences of exculpation for the sick person and other principles in the episode. The two aspects of power are closely linked, since it is through diagnosis and therapy that the choice of exculpating circumstances must be communicated and legitimized...It is by his choice of translators that the sick person can exercise control over what sorts of translations are possible, and what sorts of audiences will be mobilized during the episode.

Hoodoo versus West African and Haitian Voodoo

One of the basic differences between American Hoodoo and Haitian Voodoo is that Hoodoo, although a system of belief and therapy, is not a cult, nor does it engage in cult or group activities or worship. Although both systems are concerned with spirits, their mythological structure and content vary enough culturally to have quite different processes of diagnosing and treating disorders.

A comparison clarifies the distinction. If a Black American is ailing and believes he has been "Hoodooed," he visits a Hoodoo doctor "to turn the trick." The trick is a spell in the form of a "spirit" that has been placed on someone by another. In finding out who initiated the trick and in dealing with it, *the Hoodoo doctor does not assume the role of intermediary with a higher spiritual world.* Rather, he deals directly with "spirits" arising from and functioning in interpersonal relations.

CONTINUED ON PAGE 31

*Antioch College (Ohio) on 'co-op' at McGill Medical School (Montreal, Canada), Section of Transcultural Psychiatric Research.

CME Centerfold

What did you expect? Farrah-Fawcett Majors! She probably would have been more interesting as a centerfold but probably not as useful if you are considering continuing medical education. Therefore, let's get down to more mundane things and show how you can actually make use of our CME Centerfold. This is a reprint of the AMA form to record and report CME activities for the eventual award of the Physician's Recognition Award (PRA). We are reprinting it for your convenience in the hope that it can be used as one easy way of recording your CME activities.

This is not certainly the only way you might want to keep track of these activities, but if you have not established some system to do this, we would recommend it as a good start. Doctors have indicated to us the problems that come up when inadequate records are kept and much time has to be spent trying to trace back what CME meetings, conferences, etc., they attended two or three years ago. Hopefully, this form will allow you to record these activities immediately after they occur and will eliminate any frantic research through old calendar pads and other past records. We would suggest that you set up some sort of CME folder to hold this form, certificates of attendance or other documents which you feel should be retained pertaining to your CME activities. Perhaps your secretary or medical assistant could provide a service for you in "helping the boss" keep track of past CME activities.

This particular form is appropriate because many of you will probably be using it to report your activities to the AMA for the PRA. AMA has indicated to us that they also will be sending a copy of this form plus an information booklet to all physicians within the State of Alabama who currently do not have a valid PRA. This mailing, done on an annual basis, will take place sometime during the summer. You may want to use our centerfold as a worksheet and the AMA copy as the one you formally submit for the award. We have a limited supply of copies of the AMA information booklet on the PRA but would suggest if you have any specific questions that you write the AMA at the following address: Department of Physician Credentials and Qualification, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610. Phone (312) 751-6294.

I have dwelled on the Physician's Recognition Award for considerable length because this will be the basic requirement for continued membership in the Association. Quoting from Chapter 2, Section 5 III of the *Constitution and Bylaws:*

III. General Requirements—(1) The Physician's Recognition Award of the American Medical Association shall be the basic requirement for continued membership in the Association. This provides that each member must complete 150 hours of acceptable continuing education every three years. The three-year continuum used for the Physician's Recognition Award begins July 1 of the initial year. (2) Alternate plans of acceptable requirements are as follows:
   A. Compliance with the continuing education requirements of the American Academy of Family Physicians.
   B. Documentation of recertification by any specialty society provided the physician limits his practice to the definition of the specialty.
   C. The continuing medical education requirements of specialty societies other than the American Academy of Family Physicians should such become established. Such programs would be subject to review by the Medical Education Committee prior to their acceptance.

IV. Implementation—It is recognized that most members of the Association have many of the credits necessary for the Physician's Recognition Award, and that most members could comply as of the present.

Upon approval of the plan there will be a three year voluntary period in which the membership will have the opportunity to familiarize themselves with the procedure. Following the voluntary period the Association will honor those physicians who have successfully fulfilled the requirements by awarding them the Medical Association of the State of Alabama's Physician's Recognition Award.

The Medical Education Committee will be responsible for keeping records and supplying the Board of Censors with the names of those members who have not complied within the required period. Each year it will provide a report form to be sent to all members on July 1, so the reporting may be done on an annual basis for the physician's convenience."

The three year voluntary period is from July 1, 1976 - July 1, 1979; thereafter the CME requirements become mandatory for membership in the Medical Association.

Presently, we are researching the most effective way to establish administrative procedures to insure the future mandatory membership requirements are met. At present, we are surveying all other state medical associations who have mandatory CME requirements to determine how they have handled this. We are also reviewing mechanized equipment from various manufacturers to enable us to perform this additional administrative task in a smooth and efficient manner. The procedures are also being studied by the Council on Medical Education. We will keep you advised on our progress.

APPLICATION FOR THE AMERICAN MEDICAL ASSOCIATION

PHYSICIAN'S RECOGNITION AWARD

FOR PARTICIPATION IN CONTINUING MEDICAL EDUCATION

Important

Your application for the Award is based on your Continuing Medical Education activities for the qualifying period three years immediately preceding the date of your signature below. Activities not within this qualifying period cannot be accepted. Please read instruction booklet before proceeding.

- Please print name and address here.

-

Medical Education Number: _____
(insert - if not printed on label with your name and address - number is found on your membership card.)

YOU NEED COMPLETE ONLY the mailing instructions if you have any of the following (Please check)

- ☐ **California Medical Association.** Participated in the continuing medical education certification program during the past three years and have reported a minimum of 60 hours in Category 1 and a total of 150 hours or have a valid CMA certificate.
- ☐ **Oregon Medical Association.** CME Certificate that is currently valid.
- ☐ **A.A.F.P.** Membership in Good Standing
- ☐ Completed the requirements of the **A.C.O.G** Continuing Professional Development program

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Mailing Instructions

Send this completed application with the appropriate application fee to:

Department of Physician Credentials and Qualification
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

I hereby apply for the AMA Physician's Recognition Award and certify that the information provided is correct

_____ _____
Date Signature

My non-refundable application fee is enclosed as checked below

Effective January 1, 1976:

- ☐ No fee for AMA members
- ☐ $25 00 (non-AMA members)
- ☐ No fee is charged for physicians who were in an AMA (LCGME) approved Intern, Resident, or Fellowship program during the year preceding the date the application is submitted

If you are not now an AMA member and plan to join, or would like information about joining the AMA, please check this box. ☐

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Category 1: CME Activities with Accredited Sponsorship or Co-sponsorship

At least 60 credit hours in this category are required for the Award. The total 150 credit hours may be earned here. To qualify for Category 1 credit a CME activity must be sponsored or co-sponsored by an organization accredited for CME and must meet the definition of a planned program of CME. See Instruction Booklet for more details.

Sponsor	Location of Sponsor	Kind of Educ. Activity	Dates (inclusive)	Hours
Ind. Univ. Sch. of Med.	*Indianapolis, Ind.*	*Cardiology Course*	*Jan. 6-7, 1975*	*6*

EXAMPLES

Internship, Residency, Fellowship or Education for Advanced Degree
An AMA approved internship, residency or fellowship taken in the United States is credited at 50 credit hours per year for full-time training. Fifty credit hours also are allowed for each full academic year of education leading to an advanced degree other than an M.D. degree in a medically related field. Do not record training that took place more than 3 years prior to the date you signed this application.

Category 2: CME Activities with Non-accredited Sponsorship *There is a limit of 45 credit hours for this category.* Report as in Category 1.

Category 3: Medical Teaching *There is a limit of 45 credit hours for this category.*

Hour-for-hour credit may be claimed for student-contact teaching of medical students, physicians and allied health professionals.

Sponsor	Location of Sponsor	Kind of Educ. Activity	Dates (inclusive)	Hours
Univ. of Pa. Sch. of Med.	*Philadelphia, Pa*	*Teaching*	*'74-'75*	*45*

EXAMPLES

Category 4: Papers, Publications, Books and Exhibits *There is a 40 credit hour limit for this category.*

Ten credit hours may be claimed for each scientific paper, publication or exhibit. Scientific papers must have been presented or have been published during the three year qualifying period.

Title	Name of Pub. or Sponsor	Paper, Book, Exhibit, (specify)	Date	Hours
Mgt. of Cardiac Emerg.	*Pa. Acad. of F.P.*	*Paper*	*4-24-75*	*10*

EXAMPLES

Category 5: Non-supervised Individual CME Activities *There is a limit of 45 credit hours for this category.*

Not more than 22 credit hours may be claimed in any one subcategory. (A. Self-instruction, B. Consultation, C. Patient Care Review, D. Self-assessment Examinations, E. Specialty Board Preparation) Subcategories of Non-supervised Individual CME Activities are described in the Instruction Booklet.

Sponsor or Consultant	Identification of Topics, Publications or Materials	Indicate subcategory	Hours
Mass. Med. Soc.	*New England Journal of Med*	*A*	*9*

EXAMPLES

Category 6: Other Meritorious Learning Experiences *There is a limit of 45 credit hours for this category. Refer to the Instruction Booklet for directions.*

Report of Continuing Medical Education for AMA's Physician's Recognition Award

Accredited Sponsor or Co-sponsor	Headquarters Office of the Accredited Sponsor City State	Description of Learning Activity (Title of course, seminar, CME intermittent program, field of medicine, etc.)	Inclusive Dates of Attendance	Hours of Category 1 credit certified for the activity	Totals

CATEGORY 1. C.M.E. Activities with Accredited Sponsorship (At least 60 hours are required. The total-150 credit hours-may be earned in this category.)

Please print or type

Total number of hours spent in Category 1 Credit Hours

Sponsor: Name of Medical Institution or Organization	Headquarters Office of the Sponsor City State	Description of Learning Activity (course, paper, journal name, etc.)	Inclusive Dates of Attendance	Hours of Study	TOTALS

CATEGORY 2: C.M.E. Activities with Non-accredited Sponsorship (Limit of 45 credit hours.)

Total number of hours spent in Category 2 activities: _____

CATEGORY 3: Medical Teaching (Limit of 45 credit hours.)

Total number of hours spent in Category 3 activities: _____

CATEGORY 4: Papers, Publications, Books and Exhibits (There is a 40 credit hour limit for this category.)

Title of Paper	Title of Journal	Date of Publication	

Total number of hours spent in Category 4 activities: _____

CATEGORY 5: Nonsupervised Individual C.M.E. Activities (Limit of 45 credit hours. Not more than 22 credit hours may be claimed in any one subcategory.) Please designate appropriate subcategory.

Type of material, or activity	Title	Sponsor	Inclusive Dates	

Total number of hours spent in Category 5 activities: _____

CATEGORY 6: Other Meritorious Learning Experiences (attach description-see booklet for instructions.) 45 credit hour limit.

Total number of hours spent in Category 6 activities: _____

TOTAL Credit Hours Completed During the Three Year Qualifying Period Immediately Preceding (At least 150 credit hours needed.) _____ (date) **TOTAL** _____

(See page 1 for instructions regarding mailing. Allow up to six months for processing.)

NC:549-M:8/76:400M

The cultural attitudes fostered by both Hoodoo and Voodoo, however, nurture the phenomena of autosuggestion and conversion. The Hoodoo doctor is autonomous and prescribes and cures the individual patient. Voodoo, on the other hand, is characterized by the following: (1) devotion to a deity or deities; (2) ceremonial music and dancing, with specific meaning according to particular spirits; (3) collectivized tension, excitement, ritual, and possession behavior; (4) the presence of the houngan, in his role as healer and intermediary possessed by loa (spirits) and supported by group possession; and (5) a sacrificial offering. None of these occurrences are characteristic of Hoodoo. Voodoo, unlike Hoodoo, is invariably group oriented. Also, in Voodoo, mamaloi or priestesses abound, such as Marie Laveau, the Voodoo Queen of New Orleans, as opposed to the Hoodoo doctor which is almost always a man.

Hoodoo versus Jamaican Obeah and Brazilian Umbanda

In general, the features that distinguish Hoodoo from Haitian Voodoo apply as well to other forms of West Indian or South American "Voodou" such as Jamaican Obeah and Brazilian Umbanda. Both of these features are absent in American Hoodoo. In Brazilian Umbanda, the person presiding over a meeting is known as a "medium" who serves as a "horse" for the possessing spirit, who is seen as "mounting" or entering the medium.

A specific case may serve to highlight the differences between Hoodoo and the various forms of West Indian and South American Voodoo. In this case, recorded by Hyatt (1973), the spirit is *on* a patient and he has gone to a Hoodoo doctor to be cured. An indigenous diagnosis is made and treatment prescribed with no religious or group overtones; that is, no syncretic cult activities are to be found, nor is a consultation with a higher spiritual world. The taped question-answer session is presented as it was recorded.

Q. In taking off a spell and using the wood herbs, do you use the same thing for all spells or do you use different herbs for different spells?

A: Yo' use some in de—lak yo' use watah.

Q: How do you do that?

A: Don' let de watah hit de groun', ketch de watah 'fo' (before) it hit de groun'.

Q: Rain water?

A: Dat's right. Ketch it in de glass, pitchah, ketch it above de groun'. Don' even let de watah drap (drop) off de top of de house. Set it (container) out one side upon a shelf an' de rain come until it git full. If yo' ain't got it full, de' (they) take an' po' out dat an' git it (water) till yo' git it (container full)—de rain watah. An' take it fo' a wash *regardless of whut kinda spirit 'got on yo'.* In nine days time yo' will be all right. But yo' gotta wash. Ketch about a half a gallon or a gallon an' yo' don' throw de watah away after yo' firs' wash. Yo' wash yo' face in dat. Yo' kin wash yo' han' in any othah watah, but chew wash yo' face an' haid in dat watah. Den po' dat (rain) watah in anothah jah (jar) an' let dat stay. Tomorrah mawnin' yo' get up, yo' do de same thing, yo' wash yo' face an' hair (in the preserved rain water). An' de nex' day yo' wash in de nex' watah dat wus had fer nine days. Den yo'll put all dose watahs tuhgethah, all in one, an' dey travels to de sundown way.

Q: To the sundown what?

A: To de sundown side.

Q: Sundown side. Well, you said "way" didn't you?

A: Well, in de way dat da sun go down at—see, out in de wes'. Yo' turn yo' back to de left' at de lef' cornah. Yo' turn yo' back to de lef' an' wave dis bottle ovah yo' haid (demonstrates).

Q: You swing it around over your head.

A: Yes, an' let all de watah po' out. Dat yo' see. Den yo' throw dis stuff by turnin' dis bottle loose (so that) de' (dey=they) all go out. Turn 'em (loose, the nine waters) an' let 'em stay. An' day (the patient) walk off from de house, say, "Go." Tell 'em to take an' carry 'em wherevah day come from. Den he go back where he come from. An' whosoevah brought on de spell, it is off. Ah'll bet anything or not dat it's off.

Q: Now, you take this rain water that you catch, a half gallon or a gallon, and you wash in that nine days. The same water?

A: Yes, de same watah.

Q: Nine days, and then you throw it to the west back over your head; but you swing it around over your head when you do that—in a glass jar or something.

A: Ovah yo' lef' shouldah.

Q: And you don't look back—walk away.

A: Yes.

From this brief discussion, it appears that the Hoodoo doctor remains crucial to the socio-cultural constructed "symbolic reality" of the Black American. If this is recognized, a comparative approach to medical healing in Hoodoo could be revealing. As Kleinman (1973) points out:

> A phenomenology of healing practices and a general model of the healing relationship and process is precisely what is required for a clearer and more critical understanding of the systems of medical care as well as for efforts aimed at restructuring modern forms of medical care.
>
> Symbolic reality neither denotes the realm of actual events and biological processes nor the personal subjectivity of the individual; rather, it represents the mediating social and cultural world of ideas, values, sentiments, meaningful symbolic forms, social relations and the like; that is, the sphere of socially legitimated human reality in which most of us function and work. *It is within a given society's symbolic reality that medical systems exist and function, as do all other cultural systems; thus illness is shaped into human experience, and that healing takes place.* (Author's emphasis)

Hoodoo versus Other North American Methods of Folk Healing

The distinguishing characteristics of Hoodoo have been generally overlooked by such researchers as Snow, who has lumped Hoodoo and other forms of folk healing together. In her article entitled "Folk Medical Beliefs and Their Implications for Care of Patients" (1974), Snow—misled

perhaps by superficial similarities—included Hoodoo among folk medical systems such as those of the Pennsylvania Dutch, the Hutterites, the Amish, the Appalachian Whites, the Cajuns of Louisiana, Kansas farmers, Puerto Ricans, and Mexicans without making the necessary distinctions. Yet Hoodoo is basically different from all these forms of folk medicine.

It is true that in most of the above-mentioned systems, all indigenous to continental North America with the sole exception of the Puerto Rican, the curing is not group oriented or syncretic as in West Indian or South American Voodoo. But differences do exist. Even though curing is done individually, it usually has a religious orientation, usually Catholic in the case of Puerto Ricans or Mexicans, usually some form of Protestant fundamentalism in the case of the Hutterites, Amish, and Pennsylvania Dutch. In all these groups, God is seen as the ultimate healer.

The Pennsylvania Dutch "powwowers" regard the Bible as partiicularly effective in curing a "hexed" patient. Furthermore, the Pennsylvania Dutch powwower has yet another feature that distinguishes him or her from the Hoodoo doctor. The powwower will frequently "draw" the disorder from the patient's body into his own. The powwower, in effect, "takes on" (absorbs) the illness of the patient. This is something no Hoodoo doctor would consider doing.

In the shamanistic cult activities of the American Indian, deities and gods are invariably involved. There ceremonies are usually group oriented, thus distinguishing this form of indigenous medicine from Hoodoo. In addition, the collectivized tension, ceremonial dancing, and trance-like state of the participants in many American Indian medicinal activity make this type of folk medicine more akin to Voodoo than Hoodoo.

Hoodoo also appears to have little in common with the Pentecostal sects of both Haiti and the United States. Both of these sects are, unlike Hoodoo, group, God, and possession oriented. Possession in this case represents the phenomenon of glossolalia or "speaking in tongues."

Attention should be paid to similarities, but inter- and intracultural variations of symbolic realities in their relationships to illness are of major concern if ethnopsychiatry is to make a meaningful contribution.

The Clinical and Ethnopsychiatric Meaning of Hoodoo

There appears to be four continua in the cultural evolution of Hoodoo: (1) the development of Hoodoo itself through a synthesis of Christian or Catholic beliefs and, sometimes, Protestant fundamentalism; (2) the priestly cult and collendrical healing ceremonies of Voodoo evolving into the practices of the individually trained and independently practicing Hoodoo doctor; (3) the evolution of Hoodoo practices from rural, provincial areas to urban, industrial cities, predominantly in the North; (4) the evolution of behavior disorders according to cultural patterns logically creating the consequent movement from conversion and hysteriform disorders, involving the voluntary neuromuscular or sensory-perceptual systems, to the Euro-American psychosomatic form of illnesses founded on disordered functioning of the autonomic and vegetative bodily systems.

Continuum 4, it should be noted, can only be hypothesized on the basis of general differences apparent between the urban clinical (etic) cases of Tinling (1967), Wintrob (1973), Cappannari (1975), and the descriptive (emic) examples of Hyatt's ethnographic observations (1935, 1965, 1970, 1975). Hyatt's rural examples tend to resemble hysteriform disorders, in contrast to the somatic preoccupations, delusional systems, and psychosomatic illness of the urban cases.

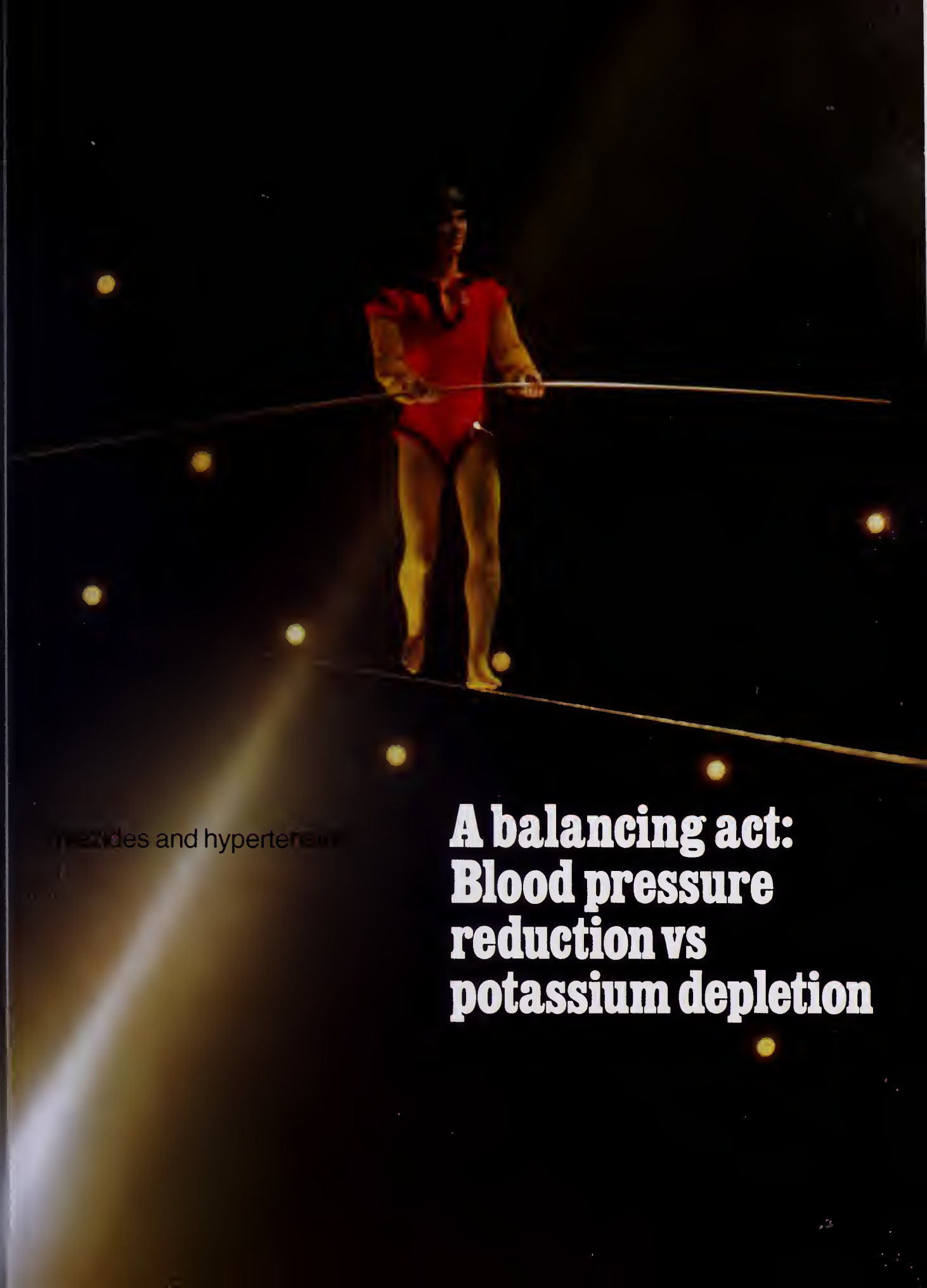
A further point to be considered is the functioning of autosuggestion and conversion involved in the trancepossession syndromes of illiterate or primitive cultures. Here, various symbols or scapegoats within the pressure parameters of kin and family relations allow inadequacies and frustrations to be projected in a culturally channeled manner—witchcraft. This does not occur in modern cultural conditions, where the schizophrenic with paranoid reaction in his idiosyncratic belief system and notions of persecutions is to be expected in the anomic conditions and economic arrangements so typical of Euro-American culture. Hence, in differential diagnosis, Hoodoo beliefs, particularly as they function in cultural doctrines of belief in witchcraft, can hardly be seen as *atypical* content of paranoid schizophrenic reaction.

The shift in Continuum 3 may be the causative basis for the dysfunctionality of historic Hoodoo beliefs in Black American culture. Such dysfunctioning cultural processes can be considered pathogenic. Signs of this phenomenon have been reported by Weiner (1969), who found that more than half of the Blacks he interviewed believe their health has rapidly diminished during the last three generations. Two-thirds of urban Black Americans revealed to Brunswick and Josephen (1972) that they "feel sick" and at least three-fourths of adolescent Harlem Blacks expect "sickness" for the better part of their lives. Finally, Cornely (1968) tells us that the mortality and morbidity rate between Whites and Blacks is continually widening.

The effect of Continuum 3 on healing processes may also be disastrous. While the problems of industrialized existence continue to place massive stress on traditional Black culture, its rate of disintegration increases. Persistent disregard of Black culture by the Anglo medical establishment only intensifies the already high rates of mental and physical disorder within the Black American culture. Caught up in this process, the Hoodoo doctor, although enjoying a culturally prestigious and advantaged role for curing, is clearly unable to cure many of the psychosomatic illnesses.

However, not only the Hoodoo doctor is hampered in treating illness. The clinical cases of Tinling, Snell, Wintrob, and Cappannari clearly outline the problems involved when allopathic medicine attempts to treat a Black who attributes the origins of his disease to an etiology within a culturally-constituted symbolic reality which is not understood by the treating physician. The physicians found themselves unable to enter such realities. While the Hoodoo doctor may be able to treat the psychological conditions, he will inevitably fail with many of the somatic aspects. Since the reverse is the reality for modern medicine, a "peaceful coexistence," such as Wintrob recommends, must be sought.

CONTINUED ON PAGE 37



...ezides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

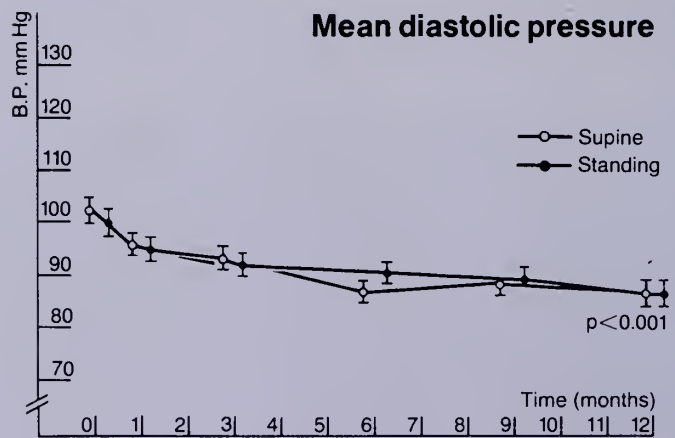
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.



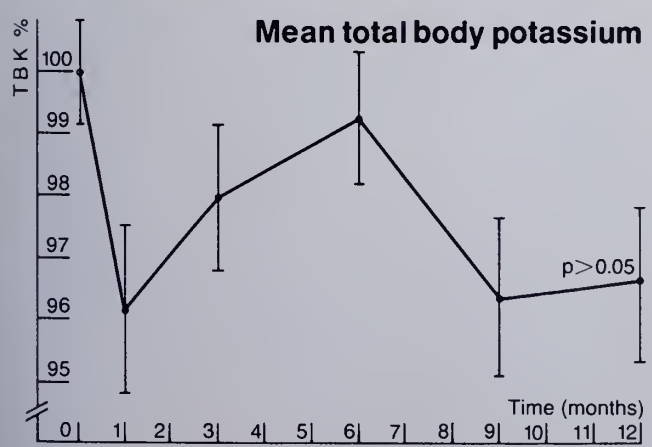
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Bendro-flumethiazide Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5 mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0 mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day
Naturetin®
Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION
Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS
The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS
Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS
Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS
Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS
Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS
Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION
Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE
Store at room temperature; avoid excessive heat.

HOW SUPPLIED
2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

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Much has been written on the psychiatric effects of urbanization on American Indians. Virtually nothing, however, has been done on similar etiology for Black American psychopathology. According to the principles of social psychiatry, there should be little difference between the *function* of the Native American Church and Black American Hoodoo. That is, both function as a reaction to the cultural conditions of existence, maintain social support-identity-solidarity, and, finally and most importantly, are culturally-sanctioned means of alleviating interpersonal stresses inherent in any culture. Indeed, Suttles (1971) has advanced the theory that such activities are not only culturally functional and integrative for Black American culture, but psychologically healthy as well.

In every article of medical literature dealing with the subject of Hoodoo, the physicians were in agreement on one point: most of their patients arrived at both their disorder and final cure within their culturally-constituted symbolic reality. "Often times," reported Kimball (1970), "the modern medicine man finds it expedient to seek out the services of a 'root-doctor' " who can exorcise the spell cast over a patient. "Such a person has followed his or her people north. At the University of Rochester, the author and his colleagues had on a number of occasions to utilize the services of root-work" (p. 803). Kimball's patient, however, did not return to the medical clinic, but probably sought the services of a Hoodoo doctor. In such cases the symptoms are non-specific. Often there is an organic explanation for the symptom—for example, tuberculosis of the bone; but the victim will not accept legitimate medical interventions unless roots are also worked. There are indications that because of anxiety or other emotions induced via roots non-specific physiologic alterations occur that may explain such phenomena as sudden death, syncope, and pseudocyesis that are sometime founds in relation to roots.

Tinling, of the University of Rochester, contends:

> The burden is on the doctor to ask the appropriate questions..."Do you mean that someone is working roots on you?" or, "Could it be roots?",,,The physician must remember that the patient or his family may see the root-doctor as the only person who could help that patient. *Depending upon the circumstances, it may be wise for a physician to allow the patient to seek such help.* (Author's emphasis)

Four of Dr. Tinling's seven patients received their final cure after having seen a Hoodoo doctor. Cappannari's (1975 patient who suffered from regional enteritis, emerged from a hypnosis-like state induced by a fundamentalist Baptist minister, who had Hoodoo affiliations, reading biblical passages concerning the casting out of demons. This apparently dispelled the "hex" and cured the patient.

A question arises: whether modern medicine, including psychiatry, can successfully collaborate with the practitioners of Hoodoo. Hes has stated that the therapist in particular is faced with the following decisions: (1) to fight shamanism as unmedical and unscientific, (2) to find a compromise or division of labor between the shaman and the occidental therapist, or (3) to accept shamanism as such and abandon a considerable number of patients to people who might overlook serious diseases. Hes, like Tingling, urges a compromise, with one qualification—that a prior search for somatic illness be made.

Snell (1967) reinforces the need to consider Hoodoo beliefs in differential diagnosis:

> If the physician fails to ask about hexing beliefs or otherwise invite open discussion of them, a serious potential obstacle exists to the achievement of a therapeutic rapport. The patient may feel that if the doctor does not know what is really causing his symptoms he cannot possibly help him. (p. 313)

If indeed such a rapport can be obtained, Snell suggests, "Using hypnosis can be an effective, ethical technique" (p. 311).

Weidman (1975) extends the ramifications of Hoodoo into the boundaries of general medicine. Such beliefs, she notes, have been found not only in psychiatric cases but *in pediatric and general cases.* A recent well-documented instance from *Family Medicine* of psychogenic death from such beliefs provided a case in point.

Other cases have been reported, adding further proof of psychosomatic effects. Noel (see Michaelson 1972) used calcium gluconate in the treatment of his "hexed" patients whose manifest disorders he described as "psychophysiologic—not unlike colitis or gastric ulcers" (p. 58). One of Wintrob's (1972) North American patients died of what he terms "hex death;" another became asymptomatic and was discharged after being treated by a "root-doctor." On the basis of this clinical experience, Wintrob advised physicians that sensitivity to culturally determined beliefs and practices of patients whose ethnic and social class background differs from that of the treatment personnel is crucial to accurate assessment of those patients' illness, whether medical or psychological. In evaluating, the doctor must take into account folk beliefs and folk-medicine no less than interpersonal stresses and intrapsychic factors. The lesson is clear: *to ignore any of these focuses is to invite clinical error.*

Young (1976) states the transcultural problem as follows:

> The interests of sick people, curers and people who worry that they may become sick are dominated by a medical paradigm. This means that they frame their questions and organize their behavior in order to identify, remove, arrest, alleviate, or prevent the disease symptoms that have intruded or threaten to intrude into everyday life. In brief, their interests focus on the *efficacy* of medical beliefs and practices. Because a people's beliefs and practices about prophylaxis, diagnosis and therapy constitute the greatest part of any society's efforts to understand and deal with sickness, they must be the indispensable *materia prima* of the anthropologist who wants to study sickness. (p. 6)

Young maintains that going beyond the medical paradigm of a particular people and using the Western or Euro-American paradigm to evaluate all other medical systems is faulty for two reasons: (1) analysts can only deal with their medical matters in a fragmentary way, and (2) while this paradigm can explain why people hold certain beliefs, it cannot explain why other sorts of beliefs and practices persist.

Young further maintains that an expansion of the meaning of illness may be necessary:

> How can the field of interest be defined without the Western paradigm? Although it is reasonable enough to say that beliefs and behavior can be defined as "medical" when they somehow refer to sickness, if we leave the matter here we also leave our assumptions implicit. The question which should be asked is: What, precisely, does "sickness" mean? The everyday definition of the word will not do since it has evolved out of the practical traditions of the Western healing arts and has taken its form within the institutional framework of the Western medical profession. What is needed is a concept of sickness that is consistent with the sorts of analytical concepts with which anthropologists study other institutions or ethnographic categories. It should be useful for cross-cultural comparisons and it should deal with facts that are examples of social behavior. (p. 6)

Conclusion and Research Recommendations

One can safely conclude that little is truthfully or systematically known about the Hoodoo doctor and his healing techniques and powers or of the overall belief system that supports Hoodoo. This should not warrant continued disregard for the abilities of Hoodoo doctors by physicians; on the contrary, it should *stimulate research possibilities.* However, such research would require of its participants a readiness to examine their own culture. Murphy (1973) adds:

> A start is being made with the subject, particularly by White Northern American therapists treating Negro patients, but it is only a start. If transcultural psychiatry could show how much the therapist's cultural unconscious is affecting his perception of the patient and his problems, and show also how to handle these feelings, this might be the greatest contribution which transcultural studies could make to general psychiatry at this time. (p. 716)

Tinling suggests clinicians may now be able to observe psycho-physiological changes in the hexed patient rather than rely on poorly documented reports from remote areas. At this point, it is true, there have been no sound ethnological or ethnopsychiatric studies made which answer such necessary informational needs as: the cultural conditions under which Hoodoo exists and operates; objective analysis of culturally-induced stress, emotional economy, culturally-approved cathartic outlets for this stress and consequent types and forms of disorders; intrafamilial-personal factors; psychopharmacological aspects (*materia medica* aspects); psychophysiological changes; theory of illness and statistical data on the use, and timing, in the course of illness when the Hoodoo doctor and/or M.D. is contacted. Information of a purely ethnological nature has also not been widely obtained.

However, psychophysiological changes in the hexed patient can be fully observed and documented by field-workers despite claims to the contrary. In the continuing discussions on the etiology of Voodoo death, Lex (1974) maintains that revival of the question indicates that ethnographers either lack knowledge of autonomic system functioning or disavow the significance of the autonomic nervous system in human behavior. However, she strongly contends that

> empirical testing of the explanation of death by suggestion—the practitioner's manipulation of the autonomic nervous system through the victim's cognitive apprehensions of witchcraft—should neither be difficult nor require sophisticated laboratory apparatus. Pupillary constriction, easily observable and indicative of parasympathetic activation, provides one ready diagnostic for field workers; the amount of saliva, of perspiration, degree of muscle tonicity and skin pallor in an individual are also discernible without complicated instruments. (p. 822)

Transcultural psychiatry has already learned much from American Indian therapists. To cite only a few examples, Opler's "Ute Indian Dream Analysis," Jilek's (1974) *Salish Indian Mental Health and Culture Changes,* and, perhaps the most provocative, Johnson and Proskauer's (1974) study of "Hysterical Psychosis in a Prepubescent Navajo Girl." This eleven-year-old girl received treatment from both a shaman and an Anglo psychiatrist working cooperatively. This latter approach provides an ideal model; but the goal should not be replacement of the indigenous therapist or his cooperation as an "associate therapist" in the hospital setting, but rather a *peaceful coexistence.* Such a condition has already been reported by Bergman (1973) in his involvement in the establishment and training program of a Navajo school for medicinemen. It may soon be possible, given more such advances, to develop similar programs for Hoodoo. In the end a successful integration of Black culture and modern medicine can be achieved. ●

(References Available Upon Request)



"We're using it as a substitute for shock therapy."

BY GARY J. BYRD, M.D.*

Expert Witness

A Role By Force Or By Choice For The Alabama Physician?

Throughout the United States, courts are making increasingly frequent use of physicians as expert witnesses in both civil and criminal matters. Though there is a growing subspecialty of legal medicine which is composed of physicians who are prepared by training and experience to testify in court, in the great majority of cases in which a medical expert is needed physicians who are primarily clinicians are called. Usually the clinician is, at best, vaguely familiar with his rights and privileges under the law. As a result of this unfamiliarity, the clinician is very often not treated in a fair and equitable manner in the courtroom.

The current status of the law in Alabama will be discussed; the alternatives available to the physician who is called to testify will be examined; and the basic rights of physicians as guaranteed by the 13th and 14th Amendments to the United States Constitution will be given.

Alabama physicians may be called to a court of law either as a witness of fact or as an expert witness. If he has been called to give expert testimony relative to a patient whom he has treated then the physician could be in a different position than when called to testify about a patient about whom he has no factual knowledge. It is reasonable, of course, in either instance that the physician would be justly and fairly compensated for his time. The treating physician may have an implied or ethical "duty" to testify for his patient while the non-treating physician could be in a position to do as he chooses.

The rights of expert witness have been decided by a state supreme court ruling in nine states: Colorado[1], Florida[2], Illinois[3], Indiana[4], Iowa[5], Kansas[6], Nebraska[7], Pennsylvania[8], and Rhode Island[9]. In each of these, except Nebraska, the absolute right of an expert witness to be paid for his time and knowledge was established.

The law of Alabama on expert witnesses has been codified in the Code of Alabama, Title 7:

> "A witness who is an expert in any art, science, trade, or profession may be compelled to appear and testify to an opinion as such opinion is material evidence, relevant to an issue on trial before a court or jury without payment or tender of compensation other than the per diem and mileage allowed by law to witnesses under the same rules and regulations by which he can be compelled to appear and testify as to his knowledge of facts relevant to the same issue."

This statute is a codification of two cases, *Ex Parte Dement*[10]; and *Hartley v. Alabama Nat. Bank*[11]. The *Hartley* case goes on further to say that an expert witness who is properly summoned and refuses to testify without extra pay is guilty of contempt[12]; although there is no statute relating to contempt in such cirrcumstances. However, an expert witness cannot be compelled to make special preparation for testimony[13].

For the most part, witnesses of fact give direct responses to questions posed by the attorneys about disputed factual matters which are before the court. Expert witnesses may, in contrast, do one or more of the following: (a) draw upon facts and express professional opinion, (b) reach conclusions, (c) respond to hypothetical questions, (d) explain technical procedures to the court, or (e) require modification or amplification of a particular question when a simple yes or no answer would be insufficient.

The testimony of a physician expert witness is based on his education, special training, and experience. In some instances this expertise has been regarded as having all the indicia of property. A Pennsylvania ruling states that "the private litigant has no more right to compel a citizen to give up the product of his brain than he has to compel the giving up of material things"[14]. If this particular expertise possesses all the character of property, then unless compensation is made, the physician will have been deprived of his property without due process of the law. This patently violates his rights secured under the 14th Amendment to the United States Constitution. If a physician expert witness should simply refuse to testify because he does not care to work and is nevertheless subpoenaed, he can raise the 13th Amendment to the United States Constitution on an involuntary servitude basis and declare that he is being illegally impressed into the service of the state.

Should an Alabama physician have reason to believe that he will not be fairly compensated for his expert testimony, he could refuse to testify. The power of a court to cite such a recalcitrant witness for contempt is divided into two categories, one criminal and the other civil. In a criminal contempt citation the individual is fined or incarcerated for an act already committed. In a civil contempt citation, the individual is incarcerated for failing to comply with an order of the court. The expert witness in the latter situation, according to the language of the United States Supreme Court in *Gompers v. Buck's Stove and R. Co.*[15] carries with him the keys with which he may unlock the jail simply by yielding to the original demands of the court. However, the physician expert witness is not simply at the mercy of the trial court in this event because in order for a judge to hold that a witness is in contempt and order him jailed until he complies with the judge's order, it is mandatory that the demands of the judge be reasonable and that he have specific authority in law to make such demands. Should the physician believe that the court order cannot satisfy these criteria he can test the validity of such an order collaterally by way of an application for a writ of habeas corpus. This would establish a test case and the issue could then be appealed to a higher court for judicial determination. If a state law or previous state court ruling is in conflict with the United States Constitution, then the former must yield to the latter.

In conclusion, it is likely that this problem will be resolved only with difficulty and likely will eventually require adjudication. Until that occurs, the local bar

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association, medical society, and judiciary could collaborate in drafting a standard method of reasonably compensating the subpoenaed medical expert witness. ●

REFERENCES

1. Lamont v. Riverside Irrigation District, 498, P. 2d (1972)
2. Tiedke v. Fidelity and Casualty Co. of N.Y., 222 So. 2d 106,210 (1969)
3. Ill. Sup. Ct. R. 17-2 (5 Sept. 1961) (Impartial Medical Experts)
4. Dills v. State, 59 Ind. 15 (1877) (Additionally, the State Constitution states "No man's particular services shall be demanded without just compensation.")
5. Snyder v. Iowa City, 40 Iowa 646 (1875)
6. Womer v. Aldridge, 125 P. 2d 392, 1942
7. Peek v. Ayre's Auto Supply, 155 Neb. 233, 51 N.W. 2d 376 (1952)
8. Pennsylvania Co. for Insurance v. Philadelphia, 262 Pa. 439, 442 (1918)
9. L'Etoile v. Director of Public Works of State of Rhode Island, 153 A2d 173
10. Ex Parte Dement, 53 Ala. 389 (1875)
11. Hartley v. Alabama Nat. Bank, 247 Ala 651, 25 So. 2d 680 (1946)
12. 25 So. 2d, at 682
13. 25 So. 2d at 682
14. Pennsylvania Co. for Insurance v. Philadelphia, 262 Pa. 439, 442 (1918)
15. Gompers v. Buck's Stove and R. Co., 221 U.S. 418, 31, Super. Ct. 492, (1911)

What's Up? Medical Bills, etc., etc., etc. . . .

What's up? Well, medical care prices are up—that's for sure. Medical care was at 184.7 on the Consumer Price Index in 1976. (1967=100)

Lawyers' charges, for example, were at 199.9 on the 1976 CPI. Insurance and finance charges were at 196.6. Postal charges were at 222.3.

Most services pertaining to everyday living are up: having your living room or dining room repainted (225.6), having the house roof reshingled (233.4), having a sink replaced (210.2), having the furnace repaired (207.1), having the washing machine repaired (200.4), repairs of the family auto (189.7), services of a baby sitter for the evening (214.6).

Speaking of baby sitters and babies, the price of diapers registered 190.2 on the CPI while blue jeans were slightly behind at 190.0.

Coffee breaks and other between-meal snacks have also made impressive price rises: coffee was at 243.6, sugar at 201.3, evaporated milk at 204.8. Cinnamon rolls were at 195.9.

The dinner table was affected by higher prices: Potatoes (200.1), rib roast (188.4), whole ham (199.6), seafood (227.3). Bacon for breakfast was at 210.4, sausage at 226.6. American cheese, popular in lunch boxes and picnics, was at 198.6.

Prices of household utilities were up: heating fuel oil or coal (250.8), gas (200.9), residential water and sewerage services (188.7).

Of course, prices aren't the only things that have gone up. Incomes have risen, too. Per capita income after taxes has more than doubled since 1967, for an index of 202.0 in 1976.

And Social Security taxes have risen faster than either consumer prices or incomes. An index for the maximum Social Security tax on employees (if the government published one) would have been 308.2 in 1976 (1976=100). For 1977 the maximum Social Security tax index would be 332.4. ●

EMERGENCY MEDICINE
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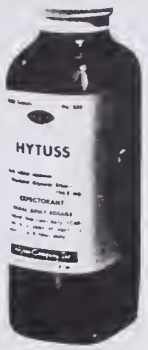


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1. Goldberg HL, Finnerty RJ, Cole JO. Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

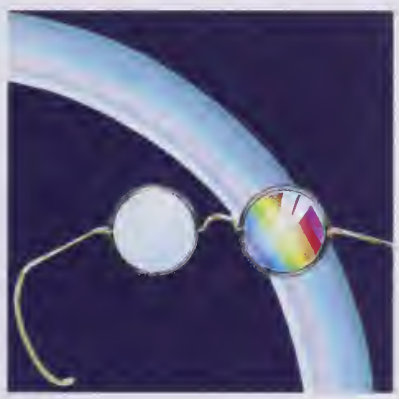
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

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Health Legislation Before Two Legislative

By the count of Richard C. Whitaker, MASA's Government Affairs Director, 130 health-related bills were introduced in the regular session of the 1977 Alabama Legislature.

The bulk of these were of only peripheral interest to state physicians. Of the bills that did not survive the regular session (Feb. 1 to May 16), most were re-introduced in the first special session (May 17 to June 9). There, most of them died, either because of legislative inaction or the Senate filibuster over the utility legislation proposed by Gov. George C. Wallace.

Less than a dozen of the bills seriously concerned most physicians in the state. The most important, perhaps, of those that did was the government reorganization measure (H 731 and S 542) in the regular session.

This proposed legislation, which MASA strongly opposed in the original draft, would have abolished the Board of Health. Also, it would have vitiated the State Committee of Public Health by relegating it to a purely advisory role.

Although the legislation would have far-reaching effects on the whole of state government structure, it was the destructive impact on the administration and direction of public health affairs that concerned MASA. Happily, the bills died on the calendars of both houses in the regular session.

Medical Scholarships

The Legislature passed, in the special session, a bill that increased the number and amount of state medical school scholarships. The new law, Act 663, signed by Gov. Wallace in late May, replaced the old scholarship law of 1965.

That earlier act provided a total of 52 scholarship loans of $2,000 a year for a four-year total of $8,000. The new law raises the annual amount to $3,000 and the total of $12,000.

The 1977 act also increases the number of scholarship loans to 20% of the student body of the medical schools of the state.

Similarly, the new law increases the number of merit scholarships for students with outstanding records, from a total of eight under the old law to 5% of the enrollment under the new, with a corresponding increase in the annual aid from $2,000 to $3,000, for a four-year total of $12,000.

The new law, like the old, provides for total or partial repayment of the loan by service contracts, subject to the approval of the Board of Medical Scholarship Awards, as follows:

- Practice for a four-year period in a community of less than 5,000 population which has been deemed to be critically short of additional medical practitioners.
- Practice for a five-year period in a community of more than 5,000 but less than 15,000 which has been deemed to be critically short of physicians.
- Practice for a five-year period in a community of more than 15,000 but less than 100,000 and repayment of one-half the loan plus 6% interest in five annual installments, beginning at the end of the first year of practice.
- Or, finally, practice for four years in Alabama in a position of Public Health or as a physician in a state institution designated by the awards board.

MASA supported the new legislation.

Drug Substitution

Proposed legislation (S 143) would have allowed pharmacists to substitute generic drugs considered to be chemically and biologically equivalent. The State Health Department would determine which drugs met the test.

Supporters of the generic drug bill argued it would bring a "tremendous savings" in medical bills, especially for retired workers and senior citizens.

Vernon St. John, himself a member of the Senate from Opp three decades ago and now a retired school superintendent, speaking in behalf of the National Association of Retired Teachers and the American Association of Retired People, supported the substitution proposal.

MASA opposed it. One physician, Orizaba Emfinger, M.D., of Union Springs, said the experience of other states with similar laws does not substantiate the claim of a big savings.

And, Dr. Emfinger warned, there have been instances where patients suffered setbacks from substitute drugs.

The bill, introduced by Sen. Bob Ellis of Birmingham, was defeated in committee.

Defining Death

A definition of death bill (H 16 in the regular session, H 15 in the special session) died in the Senate in both sessions, the victim of Senate filibusters. The bill, supported by MASA, would have defined death when respiratory and cardiac functions are maintained by artificial means (but not prohibiting a physician from using customary procedures for determining death in other cases), and would have made additional provisions for the determination of death in instances where part of the body is being donated for transplant.

A bill to expand the geographical scope of the limited medical licenses of Alabama residents and interns died in both sessions because of utility filibusters in the Senate.

The bill (H 301 in the regular session, H 38 in the special session) would allow physicians at all approved residency programs throughout the state to obtain a license to see patients at the various teaching clinics.

Sessions

Under existing state law, residents and interns are limited to the 64-block area of the University of Alabama in Birmingham.

Since there are now medical education training programs in every section of the state, it was considered necessary to bring the applicable law up to date. Otherwise, malpractice insurers might refuse to defend or settle a claim against a resident or intern on the technicality that he was acting outside the scope of his license.

The bill was supported by MASA, the University of Alabama in Birmingham, Tuscaloosa and Huntsville, the University of South Alabama, the Alabama Hospital Association and by all the various residency training programs in the state.

A bill that repealed the office of coroner in Jefferson County, substituting the medical examiner system, was signed into law in the regular session (Act 512). MASA supported the legislation, which affects only Jefferson County.

A "Patient Privacy Bill," which would have established a privileged communication between physician and patient, died in the House during the regular session. It was supported by MASA.

MASA assisted hospitals in passing enabling legislation (H 195, regular session) for a Hospital Association Malpractice Trust, an insurance trust rather than a company.

The special session saw the death, again, of the Definition of Death bill (H 15) and the Resident-Intern bill (H 38), both supported by MASA.

Certificate Of Need

However, the Legislature passed a bill (H 28) allowing the State Board of Health to issue Certificates of Need relating to the provision of health care facilities and services. This brought the state in conformity with Public Law 93-641, the National Planning and Resources Development Act of 1974. MASA supported the legislation, which was signed into law June 16 by Gov. Wallace.

A bill legalizing the use of the controversial "cancer drug" Laetrile (H 230), under certain conditions when prescribed by a physician, was introduced for the first time in the special session. It died May 31.

Health committees in neither house held hearings because not enough time remained in the session.

MASA opposed the bill, which will be re-introduced, proponents said.

H 139-140, a package to allow the Healing Arts Board to collect license fees for physicians every two years instead of annually, died. The legislation was neither supported nor opposed by MASA. ●



Mutual Assurance Agency

Alabama's new, physician-owned Mutual Assurance Society recently completed the formation of its own insurance agency. The purpose of this agency will be to provide Alabama physicians with a broad range of quality insurance coverage. Trained consultants with an in-depth knowledge of insurance will be available through the agency. They will make it possible for the agency to offer more than objectivity. Every physician in Alabama will be able to buy quality insurance coverage through this new Mutual Assurance Agency and get maximum coverage for every dollar spent. The agency will function much like an independent insurance agent selecting those policies with coverage and options which best meet the individual needs of physicians. Competent personnel will be available to make intelligent reviews of existing insurance and make sure that each physician insured has the right kind of coverage in the right amounts. The quality insurance coverage and benefits offered by the new Mutual Assurance Agency should be given serious consideration by every physician in Alabama. For additional information, write to:

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Auxiliary



"DON'T USE MY TAX DOLLARS FOR CAMPAIGNS"

MRS. JOHN S. TAYLOR
PRESIDENT

In order to conduct research to ascertain changes in the American voter's behavior, AMPAC recently completed a survey showing that "Americans want no part of public financing of congressional campaigns." Random computer drawn selections from 318 precincts of widely dispersed sampling in 48 states and D.C. represented 225 congressional districts. Mostly the respondents, when given the issue of public financing for congressional campaigns, answered, "Don't use my tax dollars for campaigns!"

The Federal Election Commission has stated that it took 35 person-years just to audit reports of the 15 presidential candidates who received matching funds during the presidential primaries. Commissioner N. O. Staebler has said that for congressional public financing, at least an auditing staff of 200 would be needed, without counting the additional personnel for the universal voter registration that Carter has recommended.

This bill would give government bureaucrats the power to choose which candidate to support, taking that right from the individual. If you disagree that our tax dollars should go for campaign financing, let your congressman know.

As taxpayers, we are allowed a $200 deduction on our joint return for political contributions. Why not contribute this to ALAPAC to help to elect the best candidates here in Alabama and throughout the states?

On the national level, there could be a large number of retirements among members of Congress as a result of ethics legislation (H.R. 287) passed in March, advises Mrs. John Chenault, AMPAC liason and Past President of AMA Auxiliary and AMASA. The bill limits use of "franked" mail, eliminates so-called unofficial office accounts, requires detailed disclosure of financial holdings and in other ways makes congressional life less pleasant than it has previously been. Here in Alabama that doesn't appear to be a problem, so why think about the national level? There are several reasons.

Mrs. Gilder Wideman, ALAPAC board member, stresses that the congressmen we elect next year will be the ones who determine what type of national health insurance will be passed and who will administer it. HEW under Secretary Hall Champion has told the National Health Advisory Committee that the administration's NHI plan to be submitted next year to Congress "will be decided untimately by HEW Secretary in consultation with the President."

With the new federal election laws, it may be harder to get good candidates to run for office, but legislation proposing some form of public financing for congressional campaigns has already been introduced. This could cause a proliferation of mediocre candidates wanting this subsidy. This bill appears to have the support of President Carter and more than 100 congressional co-sponsors. ●

Digest of actions of the State Board of Censors

The State Board of Censors at its regular meeting on June 14, 1977, took the following actions:

- The Subcommittee recommends approval of the financial statement for the period ending May 31, 1977, which shows receipts in the amount of $33,512.06, and disbursements in the amount of $138,630.23.
- The Subcommittee recommends that MASA proceed to participate in the 1978 South American Adventure and the 1978 Scandinavian Adventure hosted by Intrav, provided there is successful completion of the current tours hosted by Intrav.
- The Subcommittee refers to the full Board the recommendation of Frank G. McArthur, M.D., Birmingham, which was submitted by sources other than MASA, for consideration by the AMA Board of Trustees to serve on the AMA Council on Continuing Physician Education.
- The Subcommittee received the Memorandum from James L. Stallings regarding his termination of employment effective June 23, 1977, and also received a brief report from Mr. Bill McDonald, new Communications Director.
- The Subcommittee received as information the written report of the Education Department.
- The Subcommittee recommends that action be deferred for one month on the Resolution to amend the bylaws regarding Associate Members until Jack Mooresmith can study associate membership requirements relating to the Orientation Program and CME requirements.
- The Subcommittee recommends approval of the Resolution to amend the Bylaws regarding multiple membership.
- The Subcommittee recommends that Mr. Mooresmith proceed with the establishment of the MASA Educational and Research Foundation, Inc., and report its progress to the Board each month until establishment is completed.
- The Subcommittee received as information the Report of the Governmental Affairs Department. ●

Digest of actions—State Committee of Public Health

The State Committee of Public Health took the following actions at its meeting on June 15, 1977:

- Confirmed a Registrar for Vital Statistics for Winston County.
- Issued an invitation to a Selma physician to explain delinquencies in filing death certificates.
- Allocated tuberculosis beds for FY 1978 as follows, effective Oct. 1, 1977:

Mountain View Hospital, Gadsden	24
Cooper Green Hospital, Birmingham	15
Hale Memorial Hospital, Tuscaloosa	15
Eliza Coffee Memorial Hospital, Florence	3
Lanier Memorial Hospital, Langdale	4
University of South Alabama, Mobile	7
Montgomery	5

The allocation of beds was made on needs for patients to be served after considering length of stay, discharges and other utilization data.

- Reconsidered an application for 1122 approval for an Open Heart Surgical Facility at Carraway Methodist Medical Center and approved the application based on the evaluation of information received.
- Received a Status Report on Nursing Homes. It was noted that the report shows 689 excess existing beds.
- Approved initial issuance of assurance of need for 13 facilities and extended the assurance of need for six months for one hospital.
- Disapproved the request of Wiregrass Nursing Home, Geneva, for 28 additional skilled beds.
- Disapproved the request for Baptist Medical Center, Montgomery, for 47 bed completion of the North Tower.
- Advised that the request for approval of an oral surgeon as a fire-medic adviser under EMS was "beyond the purview of the Committee" and suggested this was a licensure issue.
- Concurred with the Licensure Advisory Board recommendation for revocation of the license of Flint City Nursing Home, Inc., Decatur, and set a hearing for July 20, 1977.
- Disapproved a request for waiver of the Warren Manor Nursing Home, Selma, for an adult-care center.
- Approved a request for waiver of the Woodhaven Nursing Home, Demopolis, contingent upon satisfactory completion of specified conditions.
- Requested the Bureau of Licensure and Certification to propose a policy for disposition of medical records of hospitals are are closed for later consideration.
- Noted the closure of Medical Service Laboratory in Florence and the return of their license on May 30.
- Received a report on the increase in activities of Rural Health Initiatives and Urban Health Initiatives Projects and requested that the Bureau of Health Planning continue to review these projects for A-95 purposes.
- Approved the End Stage Renal Disease Plan as proposed by the Ad Hoc Committee and supported by Dr. Richard Finch, who offered to present to the Network for approval.
- Considered Health Systems Agency Plans and approved recommended changes to be forwarded to the State Health Coordinating Council for consideration and action.
- Received, for study, a reply from the Federal General Counsel regarding State Health Planning and Development agency and State Health Coordinating Council relationship.
- Approved appointments to the Title XIX Medical Care Advisory Committee, effective July 20, 1977.
- Considered the impact of PL 94-566 and the effect on certain persons regarding Supplemental Security Income which would make them ineligible because of cost-of-living increases in Social Security payments. In view of the shortage of funds, the eligibility level will remain at the upper limit of $336 per month.
- Approved a nursing home reimbursement formula effective Jan. 1, 1978, to comply with the new federal regulations.
- Approved a visit by the Chairman of the State Committee of Public Health and a representative to MSA to a neighboring state to consider nursing home status and patient utilization of nursing home facilities.
- Received information regarding the financial status of the Medicaid Program and the excess costs which continue for hospitals and some increases for physicians beginning in April and May. It is currently estimated that a shortfall of $9.6 million would occur before Oct. 1, 1977 of which $2.6 million would be state funds. Attempts to gain additional State revenue have failed and even the contingency appropriation of $1.3 million, if available, would be insufficient to keep the Medicaid budget solvent. After extensive discussion of both cause and effect, the Committee unanimously recommended the curtailment or suspension of Medicaid services.
- The Certificate of Need Bill has passed and is awaiting the Governor's signature.
- The Solid Waste Bill met defeat in the Senate.
- Concurred in the appointment of William Ray Roper, M.D., as Health Officer of Jefferson County.
- Specified that no fee for service under any Title V program be collected unless approved by the State Committee of Public Health.
- Was advised that the Governor has appointed Mr. Charles Aderholt of Fayette and Mr. Kenneth G. Robinson II of Birmingham to new terms on the Council on Health Costs, Administration and Organization until Jan. 17, 1982.
- Was advised regarding the recommended immunization schedule which is provided to all new parents encouraging immunization on a continuing basis and advising that Alabama law requires certain immunizations before entering kindergarten or first grade. ●

JOSEPH A. CALIFANO, JR., SECRETARY OF HEALTH, EDUCATION & WELFARE

Plain Talk For American Physicians

In his speech to the American Medical Association in San Francisco June 19, HEW Secretary Califano had praise for the quality of care in American medicine, but condemned its cost. He spoke of the changing image of the physician, of the perceived urgency of still more changes, including the necessity of National Health Insurance.

I think it's a good thing for you and me to meet face to face; to exchange views fully and freely in a spirit of mutual respect and candor.

As professionals, we must remember that doctors and lawyers are never as good as our patients and clients say we are when their illness is cured or their case is won—and never as bad as they say we are when they get the bill.

In the short time that I've been in office, I have enjoyed the most cordial relationships with the officers and executives of the American Medical Association. They have kept me informed of your views—especially when they diverged from mine!

And I have tried to be open and candid with them—including acknowledgement of mistakes when we think we've made them.

This meeting is part of the essential, continuing communication that must exist between organizations like the AMA and a Secretary of Health, Education & Welfare. So I'm grateful to you for your hospitality. And I know that the overriding objective we all share is better health for all Americans.

It is against the background of this shared objective that I accepted your invitation to address the opening session of the American Medical Association's National Convention.

I thought it important for you to understand first hand how the new Administration views the health care industry and how we view the doctors who shape so much of that industry.

Americans would like to cling to some hallowed images of medical care in our nation: images that reach back to the placid past of our grandparents.

The Changing Image Of Physicians

One cherished image is that of the stern but wise family doctor of Victorian years, jouncing in his buggy from house to house, dispensing pithy wisdom along with the castor oil.

A second image is of more recent vintage: it is the flickering image of the television doctor: first, young Dr. Kildare, then Dr. Ben Casey, and finally, the reassuring, confidently omniscient Marcus Welby, M.D. Unlike you, Dr. Welby has only one patient at any given time. And there's another difference: all of his patients get well within the hour.

But the reality of modern medical practice today, as you well know, is much more complicated than Norman Rockwell covers for The Saturday Evening Post or television films.

It is our perception of that reality I would like to discuss today: the problems of medical practice and public policy that it poses for you and for me; and some urgent action that all of us—the Administration and the Congress, physicians and citizens—must take as we begin to deal with those problems.

For we have set ourselves an ambitious goal in America: a high standard of health care for everyone—at manageable cost.

The extraordinary talent of so many doctors has encouraged us to set our sights high. The genius of a few has provided discoveries that have given millions of our citizens superb quality care. The dedication of many has saved lives and eased pain and misery for generations of Americans.

Quality Care For All

We know that quality care is available for many Americans. We want to make that quality care available for all Americans. We seek to do it at reasonable cost. The achievement of these two goals at the same time—quality care for all, at reasonable cost—is what we are about.

The quality care objective has long characterized American medicine and physicians, but reasonable cost has not been the strong suit of either American medicine or most of its physicians. We see that not as the fault of affluent doctors—but as the most serious shortcoming of the health care system.

If we are to meet these dual ambitious goals, or even approach them, we must first see the nation's health care system clearly for what it is.

To do that, we must pull the camera back; back from the past; back from fiction, with its narrow, close-up view of Dr. Welby. When we do that there comes into view a vast, sprawling, complex, highly expensive and virtually non-competitive industry—one of the nation's largest though least understood industries, a unique system of economic relationships that are commanding, and controlling, an ever larger share of our nation's resources.

We perceive health care in America today as big business.

To be sure, health is not just another industry; the enduring strength and high quality of the doctor-patient relationship is a vital element in the medicine of the 1970's, just as it was a generation ago—and generations before that.

But the term industry is still an apt one—and it provides a critical perspective on the health care system for public policy makers.

With expenditures of $139 billion in 1976, the health care industry is the third largest in the United States. Only the construction industry and agriculture are larger.

- In 1975, 4.8 million people worked in the health industry. That was 5.1% of the national work-force—slightly more than one American worker in 20.
- In the same year, 375,000 physicians were in practice in America: one of every 570 citizens.

"The quality care objective has long characterized American medicine and physicians, but reasonable cost has not been the strong suit of either American medicine or most of its physicians . . . An average hospital stay cost less than $350 in 1965. It now costs over $1,300 . . ."

- Health care spending was 5.9% of the Gross National Product in 1965. It was 8.3% in 1975. And, at present inflation rates, it could reach 10% of GNP by 1980. In that year, spending on health care will, without some kind of restraint, have ballooned to $230 billion, $1,000 for each man, woman and child in America.

The giants of corporate America have moved in to obtain their share of the health industry—major companies like IBM and Bausch & Lomb. Many of the major pharmaceutical companies are in the Fortune 500. The profits of these drug companies are far above the average for large corporations in America.

We perceive health care as an inordinately complex and fragmented industry. It contains over 7,000 hospitals with a total capacity of 1.5 million beds; 16,000 skilled nursing homes, with a capacity of 1.2 million beds; thousands of laboratories and hundreds of suppliers of drugs, expensive medical equipment and other medical products.

Decisions in this industry are made—by a host of private and public instructions—without adequate planning at the state and local level.

Hospital Costs Have Skyrocketed

We perceive health care as a very costly industry. The median income of the average American family was $13,700 in 1975. In that same year, the average family expenditure for health care was nearly $1,600, more than 10% of the median income.

An average hospital stay cost less than $350 in 1965. It now costs over $1,300. Private health insurance premiums have jumped 20-30% in just the last year alone.

And the American people paid doctors a total of $26.3 billion in 1976.

We perceive the health care industry as virtually non-competitive. The features of the competitive marketplace that have served our people so well in other industries to promote efficient allocation and utilization of resources—are just about non-existent in the health care industry.

- The patient—the consumer—may select his family doctor —but he does not select his specialist, his hospital, the services he is told he needs, the often expensive medical tests to which he is subjected. The physician is the central decision-maker for more than 70% of health care services.
- Increasingly, the patient—the consumer—does not pay directly for the service he (or she) receives. Ninety per cent of the hospital bills are paid by third parties—private insurance companies, Medicare, Medicaid.
- These reimbursement mechanisms usually operate on a cost-plus or fixed-fee-for-service basis, the most expensive and least efficient ways to function.
- Most public and private benefit packages are heavily biased toward expensive in-patient care.
- The unavailability of price and quality information keep the consumer of health care services dependent on the decisions of the health care provider, who plays a dominant role in determining demand for health services and whose financial well-being is determined by the price charged.
- The ability to restrict access to competitors—hospital credential committees that can deny or delay privileges to Health Maintenance Organizations, for example—provide special levers of market control.

These are some of the dominant economic features of the health care industry—features which provide many powerful incentives to spend more, and few, if any, incentives to spend more efficiently.

No Competition In Medicine

We must face a basic fact: there is virtually no competition among doctors or among hospitals. And, just as important, there is precious little competition among pharmaceutical companies or among laboratories. For pharmaceutical and medical device and equipment research has become big business, with patent monopoly pots of gold at the end of the research rainbow.

These economic features pose severe problems in allocating and utilizing health care resources in the most effective way possible—problems that, although grounded in the economics of health care, relate ultimately to the broad national goal of providing, with limited resources, quality health care to all Americans at reasonable cost.

We do not perceive the health care industry as a world of good people and bad people. Doctors are not bad and para-professionals good. Hospitals do not wear black hats while government policy makers wear white ones. That is not the point.

Insensitive To Cost

The point is that doctors, hospitals, pharmaceutical companies, nursing home operators—all the inhabitants of this non-competitive, free spending, third party-payor world—act exactly as the incentives motivate them to act: conscious of quality, insensitive to cost.

The result, inevitably, is a set of economically classic structural problems.

First: Our health resources, abundant as they are, are not well-distributed, either economically or equitably.

In the past ten years, we have made considerable strides toward opening access to health care for many people. But major problems remain:

- We have not done a very good job over the past ten years of helping rural Americans get ambulatory care. The typical rural citizen is twice as likely never to have had a physical examination, as the typical citizen of a large metropolitan area. Many rural women fail to receive basic early cancer detection examinations.

Plain Talk

- In our inner cities, minority citizens still lag far behind others in their access to physician care. Polio immunization rates for black children under the age of four are one-third lower than the rates for white children.
- Here in the State of California, of 1.2 million eligible poor children, only 20,000 —less than two percent—have been reached by a joint State-Federal early screening diagnostic and treatment program.
- Only 12,000 of these children—1% have been treated. The Administration has proposed new legislation—the Child Health Assessment Program—to correct this intolerable situation in a nationwide basis.

Yet, while some are starving for health care, obesity is commonplace for others. Nationwide we have an excess of some 100,000 hospital beds. There are enough CAT scanners in Southern California for the entire western United States.

We have made progress in absolute numbers in ending the doctor shortage of 10 years ago; but doctors are unevenly distributed, geographically and by specialty. Manhattan has 800 doctors per 100,000 people; Mississippi, fewer than 80. In some disciplines, we have too many specialists, while the desperate need for primary care physicians in many rural areas persists.

And so we face a major national challenge: to redirect the flow of new health resources into underserved areas and to underserved groups so that ultimately all Americans will have fair access to quality health care. And we must ask: Can we do this in an industry with virtually no competition? Indeed in an industry where the economic incentives move in the opposite direction?

Second, not only are our health care resources poorly distributed—they are often not organized as efficiently as they might be.

As physicians have moved to more lucrative practices in the suburbs, for example, the burden of providing primary medical care in our inner cities has fallen increasingly on the outpatient departments of large metropolitan hospitals.

Yet the cost of this kind of care is high: For many patients, two or three times higher than the same services offered in other settings, such as Health Maintenance Organizations and community health centers.

Non-Physician Professionals

We have not made much progress in using non-physician health professionals to take some burdens off the physician even though we know that nurses, physician assistants and other primary health practitioners can less expensively assume many tasks traditionally performed by physicians, without lowering the quality of care. Liscensure laws are essential to preserve and maintain professional standards, but they should not be permitted to inhibit the development of new patterns of care.

"Manhattan has 800 doctors per 100,000 people; Mississippi, fewer than 80 . . ."

Third, with little incentive to be cost-effective in the use of skills and resources, it is no wonder that our present health-care system emphasizes acute care over prevention. Because of this, we are needlessly risking illness and sometimes even lives and recklessly consuming resources that could be used to meet other urgent needs.

Today the health-care challenge is dramatically different from what it was 10 or 20 years ago. Today the leading killers are not communicable diseases, but accidents, heart disease, cancer, cirrhosis of the liver—which are often caused by people's life-styles or by hostile influences in the environment.

Yet, our health-care system is not really geared to the field of prevention aimed at these killers.

We could literally save thousands of lives that are now being stunted or lost—if we could reduce the ravages of:

- Cigarette smoking, which kills through cancer, heart attack, and emphesema.
- Alcoholism, and its toll in mortality, morbidity and the destruction of family life.
- Obesity, with its sinister companions, diabetes and hypertension; and
- Accidents, which kill and maim in the office, at home, and on the highway.

In the case of each of these killers, we already have enough knowledge to make major lifesaving gains. What we lack is sufficient will and ingenuity in educating our fellow citizens about how to live more safely and sensibly.

And we sorely lack a health-care system with economic incentives as strong to prevent as they now are to cure, one which makes prevention as profitable for providers as treatment now is.

Fourth, our system of health insurance in America is an expensive and inequitable crazy quilt.

Some 18 million Americans—most of them unemployed or employed in small non-manufacturing businesses—have no health insurance at all.

Another 19 million Americans—most of them with incomes between $5,000 and $10,000—have no group insurance, only skimpy individual coverage that is at best inadequate.

The Crushing Burden Of Medical Expenses

Nearly half the population under age 65 does not have insurance that is sufficient to cover major medical expenses. National Health Insurance to protect all Americans from the crushing burden of medical expenses is essential. And I am pleased to note that you agree on the need and have been developing your own plan.

Which brings me to the over-arching problem of the health care industry in America: The problem of runaway costs. In part because of these other problems I have sketched, the cost of medical care is soaring today.

Not only is health care spending devouring an even larger share of our Gross National Product, but, under current projections:

"National Health Insurance to protect all Americans from the crushing burden of medical expenses is essential . . ."

- Total health expenditures will double by 1980;
- Hospital costs paid for by Medicare and Medicaid will double even sooner;
- If unchecked, total hospital costs could reach $220 billion by 1985.
- Health care is rising at a rate of two and one half times the rise in the cost of living.

This rapid inflation imperils the ability of uninsured people to get health care at all. It gobbles tax dollars at such a rate that they are not available for other public priorities. The federal government spends 12 cents of every taxpayer dollar on health care. The average American worker works one month each year to pay health care costs.

Clearly, the health care industry, as presently structured, has become a problem for all of us—patients, physicians, providers of care, and public officials. Certainly we can understand why the American consumers and taxpayers—and more and more top executives of large corporations—are demanding that something be done.

Thus far, the Administration has pressed forward on the cost front, as you know. The President has sent to the Congress legislation that would control the precipitous rise in hospital costs—the most inflationary sector in the health industry.

But we recognize that the proposal we have put forward—a limit on increases in total hospital revenues—is merely a stop-gap solution that is a necessary transition to more profound structural, long-term reform.

For the long term we must begin to organize health resources more effectively, distribute health care benefits more equitably, emphasize prevention and primary care, and establish a fair and effective system of national health insurance.

Physicians As Decision-Makers

Why have I spoken to you at such length about all these problems: Because you, more than any other members in the health care system, are its leaders and decision-makers.

In past generations, your profession has led this nation to some striking achievements: a longer lifespan for our citizens; lower infant mortality, the near-elimination of many infectious diseases, a rigorous system of medical education.

In the future, we must not only protect those life-saving gains; we must face another, wholly new set of challenges:

- The challenge of dramatically improving the cost-efficiency of our health care system;
- The challenge of re-directing our health efforts towards prevention as well as acute care.

Those are not challenges laid down by a government bent on ever-increasing regulation. They are demands that come from the American people and public officials, and increasingly from many of your own member physicians, who are urgently concerned about both the medical and economic health of our people.

So the government—representing the people and the consumers—must play an increasing role in health care. We will fulfill our responsibility best with your help and cooperation: but we must fulfill our responsibility nonetheless.

There are hard choices ahead; there are difficult decisions. We ask you to help us to act thoughtfully; to join with us in seeking solutions to these problems.

Doctor Control Of PSROs

I believe that the American people would prefer,—as I, and presumably you, would prefer—that the leadership in solving these problems come from within the health care system—from you—rather than from outside of it.

Some physicians are, in fact, providing such leadership:

- A large group of physicians are now partners with us in the management and operation of the PSRO program. These physicians are establishing standards, reviewing quality and sharply examining the appropriateness of care given by other physicians.
- We intend to expand and strengthen the PSRO program. Recently, a leading obstetrician expressed serious concern about rising O.B. costs and spoke out for dramatic consolidation of facilities to produce quality obstetrical care.
- Medical schools and a growing number of physicians are responding to our need for primary care.
- Some surgical specialists are taking the lead in a critical self-examination of excess surgery.
- More and more physicians are joining and starting HMOs.

These are progressive steps. We hope many more physicians will begin taking them.

The story is told that Winston Churchill once paid a visit to his doctor because he was feeling terrible. His doctor, after carefully examining him, said: "Mr. Prime Minister, if you want to feel better, I suggest you cut back drastically on your consumption of brandy and cigars."

Whereupon Churchill fixed a withering stare on his doctor and replied: "My good man, I have no intention of doing either. That is why I have come to you."

And that, in fact, is what all of us have been doing for too long in this field of health care: using our affluence to cure problems, rather than our ingenuity and self-discipline to prevent them.

We have not been willing to confront the hard fact that resources are limited and that we must find new methods to provide quality health care to all Americans at reasonable cost.

Now, the cost of our indulgence—like the cost of Mr. Churchill's indulgence—is catching up with us. We can no longer buy our way out of our difficulties. We must *think* our way out. ●

Rationed Care,

In a sense, Dr. Palmer's address was an eloquent rebuttal to Secretary Califano's message, which amounted to more and more government control of medicine. But Dr. Palmer did reaffirm support for the AMA's own National Health Insurance bill, disputing the contention of some physicians that it would nationalize the profession.

Today, in the prologue to the actions of this convention, I will be giving you an epilogue, a summation. I will be sharing with you my general perspective on health-care issues that I have been seeing minutely. We must have an overview on these issues, if their specific importance is to be fathomed in full.

In my opinion, there is a blood relationship among most of Washington's legislative, regulative, and inquisitive inroads on our profession. Growing federal intervention, as a danger in itself, is only the most obvious aspect of that relationship. And cost control is simply the most obvious device for attaining that growth.

What must be universally recognized is that cost control is *people control.* It is manipulation of the receivers as well as the providers of health services. For regardless of how the various economic, or partially economic, restraints would differ in detail, they pose a joint threat: *the rationing of care.* Even our critics must perceive that care cannot be substantially contained in cost without being apportioned.

Just consider major examples of the rationing, or potential for rationing. Consider the Health Planning Act of 1974, with its opportunities for arbitrary freezes on facilities, equipment, and services, by means of certificates of need, and local decisions.

Misnamed

In a study of such certificates at the state level, prepared for HEW, two professors found that these have done the opposite of what they were designed to prevent...that they have actually aggravated cost inflation. According to the study, the certificates of need, "reduced expansion in beds, but increased expansion in plant assets per bed, and had no discernible negative effect on total investment."

The Health Planning Act is misnamed. It is actually a health regulation act, geared to the outrageous concept that health care is a public utility.

Next, consider federal support of HMOs. Congressman James A. Burke of Massachusetts has described these as "one great piece of ammunition" against rising medical costs. Really, will HMOs have any magic wand for cost restraint? Or will the wand be merely a tight stick on the amount of care? Recent studies indicate that HMO physicians see their patients *less* often and give *less* care—including preventive care—than do fee-for-service practitioners.

Consider the proposed ceiling on hospital charges, a kind of "cap" that was also considered for physicians. It is not predictable that the most creative, resourceful, and conscientious hospitals would suffer from such economic artifice? Or that in treating all hospitals alike, the cap would penalize those that are already efficient, as a Senate health expert was quoted? HEW has estimated that implementation of physician fee schedules under federal programs would cost $1 billion. *Paradoxically, there are those in government who would be willing to spend any amount of money to control medical costs.*

Next, consider federal favoritism toward generic drugs, substitutes that can mean lower quality, personal suitability, and bioavailability, without assuring ultimately lower expense.

Consider the issue of so-called unnecessary surgery. To counter it, rationing of care has been directly proposed. The contention has been made that fiscal priorities for surgery covered by public funds should be keyed to concepts of necessity. But how can necessity always be so clear-cut?

Deaths from cancer of the uterus dropped from about 28 per 100,000 female population in 1930 to about 9 per 100,000 in 1973 here in America. This drop resulted in part from hysterectomies performed for reasons other than cancer. Yet, if they can prevent most of 12,000 uterine-cancer deaths a year in this country, they are indeed necessary and cost-effective.

"Recent studies indicate that HMO physicians see their patients less often and give less care . . . than do fee-for-service practitioners . . ."

The argument is made in government and insurance circles that a second medical opinion would check unnecessary surgery, and the cost thereof. But why would the second physician automatically be more objective or reliable than the first? Also, what about the cost of the follow-up opinion? And the cost in human terms if this opinion is wrong?

Cost Control And NHI

Inasmuch as the federal government's socio-economic efforts in health coverage point toward rationing of care...we can well ask: Wouldn't such dangerous rationing affect all Americans, under a fully tax-paid, federally-dominated form of National Health Insurance?

The Carter Administration has made cost control a prerequisite for offering an NHI plan. However, if the plan tallies with the Democratic platform of 1976, what would keep it from being financially uncontrollable, just as Medicare has been?

I can foresee two principal developments under an American adaptation of Britain's National Health Service, as intimated in the Democratic platform. First, in a variant of Parkinson's law, costs would expand to fill the taxes available for them, substantially because of bureaucratic attrition of the tax dollar. Second, as costs and taxes became too outrageous, the recourse would be a shrinkage in the quality and sufficiency of services. In other words, rationing.

If we physicians were raising costs appreciably beyond their equivalent in quality and sufficiency, there might be

Rationed Professionalism

some ground for the current cost hysteria. But the facts show that we are far more a whipping boy for inflation than a culprit, far more a victim of it than an instigator.

On that score, here are the latest statistics compiled by the AMA:

"From 1966 through 1973, professional expenses increased 98.6% while net incomes rose 61.9% in current dollars... When net income from medical practice is...deflated by the rise in the cost of living, the resultant increase in the real net income of physicians during the same period is estimated at 18%."

That's 18% over eight years. And there is good reason to assume that the same pattern still applies.

However, the heart of the matter is beyond the reach of statistics, certainly those in the government's Consumer Price Index, which has been particularly stigmatic to hospitals. Nothing could be more unfair than to compare the steadily advancing, life-expanding services of physicians and hospitals, with the price of something that is relatively static, like a sack of potatoes or a suit of clothes.

Also, it is unfair to make any cost comparison between technological improvements in health care and those in industry. As Professor Martin S. Feldstein of Harvard told a Congressional panel, "Technological progress in hospitals does not involve making the old product more cheaply, but making a new range of products that are more expensive." Certainly there should be voluntary, local initiatives to avoid any waste in the provision of care, especially any waste resulting from needless duplication of facilities, equipment, and services.

Dimensions In Care

But how reasonably could possible duplication be handled under the Health Planning Act, with its lay administrators at the local level, threading the needles made by the HEW Secretary? What qualifications have government planners or laymen for deciding dimensions in care, particularly since a medical procedure that is esoteric today may be standard tomorrow? And how qualified are such laymen to decide the distribution of facilities and their equipment, in terms of the patient with a sudden, acute illness?

When someone is critically sick, he expects his physician to be a physician, not a cost accountant, or a stand-in for cost accountants. To him, the bottom line of the computation is health and life itself. No individual—and ours is a nation of individuals—wants his care to fall victim to cost-effective common denominators. No individual wants his own care to be rationed. So in behalf of the American people, our Association must engage not only in battles on specific issues, but in a war to protect the over-all quality and sufficiency of care.

It has been my privilege to be your President-elect and President at a time when our adversary position has been greatly intensified, and widely noted. We have needed to amplify our strength and techniques against overweening federal authority, for as an early Senator from my state,

"Costs would expand to fill the taxes available for them . . . No individual wants his own care to be rationed . . ."

John Randolph of Roanoke, remarked, "Power alone can limit power." But let it always be manifest that we carry not a chip on our shoulder, but a professional and human commitment in our hearts.

We evidence this commitment in many ways. We show it in having a national commission to study what genuinely can be done against rising medical costs. Recommendations from this panel are targeted for January.

We show our commitment in our partnership with the State of North Carolina and Nebraska in a suit to nullify the Health Planning Act. In contending that this law violates the U.S. Constitution and states' rights, we are protecting the people as citizens and as patients. A decision in this case is inevitably slow because it must be reached by a three-member tribunal. But our determination is ongoing.

Our professional and human commitment shows in our policy on advertising, or, to be more precise, our position against solicitation of patients. Exposes of the horrors wreaked by spurious plastic surgeons in California underscore the dangers of solicitation. And bad care is akin to the rationing of care. Can't the Federal Trade Commission foresee the dangers of hectoring us on physician advertising, and also the accreditation of medical schools?

Our human dedication also shows in our leadership or cooperation in programs to upgrade the care in rural areas and inner cities.

Let me sound some warnings, however. Our public commitment can be only as significant as our collective identity as a profession. If this Association is to retain the confidence of the people, as patients, as voters, and as arbiters of the future of care, we cannot afford to be an ideological Tower of Babel. There can be no rationing of our mutual allegiance, without rationing our professionalism itself.

Obviously there will be disagreements in our ranks, but let us also have a final pragmatic consensus. Obviously, too, there will be misunderstandings, but let us shun willful misrepresentations.

Would Not Nationalize Medicine

Some physicians have circulated the misinformation that our National Health Insurance bill would nationalize medicine, and that pressure tactics were used at our last Clinical Convention to reaffirm our support of it. The truth is that this bill is the most practical way to sustain the private thrust of care, and that the vote in Philadelphia was "the democratic process in action," as Dr. Harlan L. Papenfuss, immediate past president of the Nebraska Medical Association, has said in a close-the-ranks spirit.



AMA delegates in convention assembled in San Francisco.

Rationed Care, Rationed Professionalism

CONTINUED FROM PAGE 53

AMA backing of an amendment to the National Labor Relations Act also is being misrepresented in some quarters. In holding, as the amendment does, that housestaff should be recognized as professional employees for purposes of organization and negotiation, we are not abandoning the belief that they simultaneously should be regarded as students. That dual identity was approved by this House of Delegates two years ago, in keeping with the "democratic process in action."

The worse victim of any misrepresentations of AMA positions is our profession, rather than those positions. We are credible, and most effectual, only when we act concertedly.

We are effective in getting all the obnoxious features stripped from the Health Manpower Act, features that undoubtedly would have made the HEW Secretary the Superdean of American medical education. Why were we so effective? Because at all levels of our federation, there was remarkable coordination in carrying our viewpoint to members of Congress and the 1976 White House.

Coordinated effort gradually is alleviating the professional-liability crisis. At all levels of our federation, we have pressed fruitfully for tort reform, physician-administered insurance or reinsurance, and meritorious countersuits. Through concerted action, we have thwarted legislative attempts to bring non-profit organizations within the scope of the FTC Act.

"We can hope to attain a reasonable National Health Insurance Program . . ."

A Spirit Of Unity

Acting reasonably together, in a spirit of unity, we can hope to attain a reasonable National Health Insurance program, one that would be fiscally, financially, and administratively prudent, while entitling every American to the care he needs.

In the fact of government controls that basically would mean people control, we must work for human amplification.

In the face of government plans that would ration care, we must work for the sufficiency of good care.

That is our across-the-board professional obligation to America. And that is the obligation I ask all of you, for all of us. ●

Address of the President, Richard E. Palmer, M.D. during the 126th Annual Convention of the American Medical Association, June 19, 1977, in San Francisco, California.

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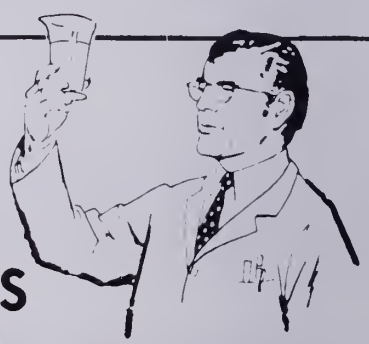
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Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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The JOURNAL

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A Matter of 'Style'

In a recent letter to William H. McDonald, Director of Communications & Printing and Assistant Editor of the *Journal*, Dean James A. Pittman Jr., M.D., of the UAB School of Medicine, wrote:

"Whether it will be possible ever to make a state medical journal competitive with major specialty journals is an open question. But at least we can have a really good state journal."

One of the first things Bill McDonald noticed after coming to work for MASA June 1 was that the *Journal* had no consistent "style." To an editor with more than 28 years of journalistic experience, which included frequent contributions to many national publications, this was baffling.

Style, in the publishing world, does not mean slavish conformity in writing. Rather, it is a standardized way of preparing manuscripts, presenting data, rules of usage and general propriety. From reading the national medical journals, McDonald concluded that the stylistic variations between them were great but that each journal had its own special way of doing things.

While he had such style books as the University of Chicago *Manual of Style,* considered the standard of American publishing, there was none that applied specifically to medical writing. Finally, he did locate one: *The Stylebook/Editorial Manual of the AMA.* The 160-page manual, now in its sixth edition, derives directly from others of the kind and pays particular tribute to the much older Chicago work.

Like all style books, the AMA's may be arbitrary and capricious in some particulars.

But the book at least provides a logical standard of consistency, a point of departure for authors. It also contains a wealth of information on proper medical usage, malaprops, certain taboos, the preparation of manuscripts, correct reverence format, the use of graphics, proofreading marks, and so on.

We have ordered a supply for interested contributors, which will be available at cost, $6.50.

All of which is part of the plan, which may take time to implement, to improve the quality and readability of the *Journal.*

S. Lon Conner
Executive Director

INFORMATION FOR AUTHORS CONCERNING MANUSCRIPTS

Manuscripts should be typewritten, double spaced on white paper 8½ x 11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain in the order given: Name of author, title of article, name of periodicals with volume, page, month — day of month if weekly — and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

Length Of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

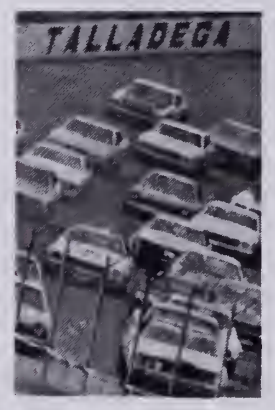
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Classified advertising sells for $7.50 for 30 words or less plus 20 cents for each additional word, payable in advance. Classified displays sell for $10.00 per column inch. Ad box numbers can be substituted for formal addresses upon request at a cost of $2.00. Copy deadline is the 1st of the month preceding issue of publication. Send copy to: Assistant Managing Editor, JOURNAL, P.O. Box 1900-C, Montgomery, Alabama 36104. (DISPLAY SAMPLE)

ABOUT THE COVER



The small, fast and sometimes violent world of James L. Hardwick, M.D., is depicted on this month's cover. Photo courtesy of the Talladega Speedway—also the aerial on page 12. The rest of the pictures are by the author. See "Racetrack Medicine," page 10.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
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Antivert®/25


(meclizine HCl) 25 mg. Tablets
for vertigo*



Only 1 tablet B.I.D.

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double-strength dosage form for acute cystitis* patients

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New Gantanol® DS (sulfamethoxazole) tablets offer even greater convenience and economy for your patients with acute, nonobstructed cystitis due to susceptible strains of *E. coli, Klebsiella-Aerobacter,* staphylococcus, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*...

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- In a clinical study of 406 patients on Gantanol (sulfamethoxazole) B.I.D., close to 9 out of 10 patients achieved negative urine cultures. While Gantanol tablets were used in this study, one Gantanol DS tablet has been proved bioequivalent to two Gantanol tablets.*

Gantanol is contraindicated during pregnancy, during the nursing period, and in infants under 2 months. During therapy, maintain adequate fluid intake, perform frequent CBC's and urinalyses with careful microscopic examination.

* Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

and economy

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter,* staphylococcus, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*), in the absence of obstructive uropathy or foreign bodies. Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis). *Usual adult dosage:* 2 Gm (2 DS tabs or 4 tabs or 4 teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: DS (double strength) tablets, 1 Gm sulfamethoxazole; Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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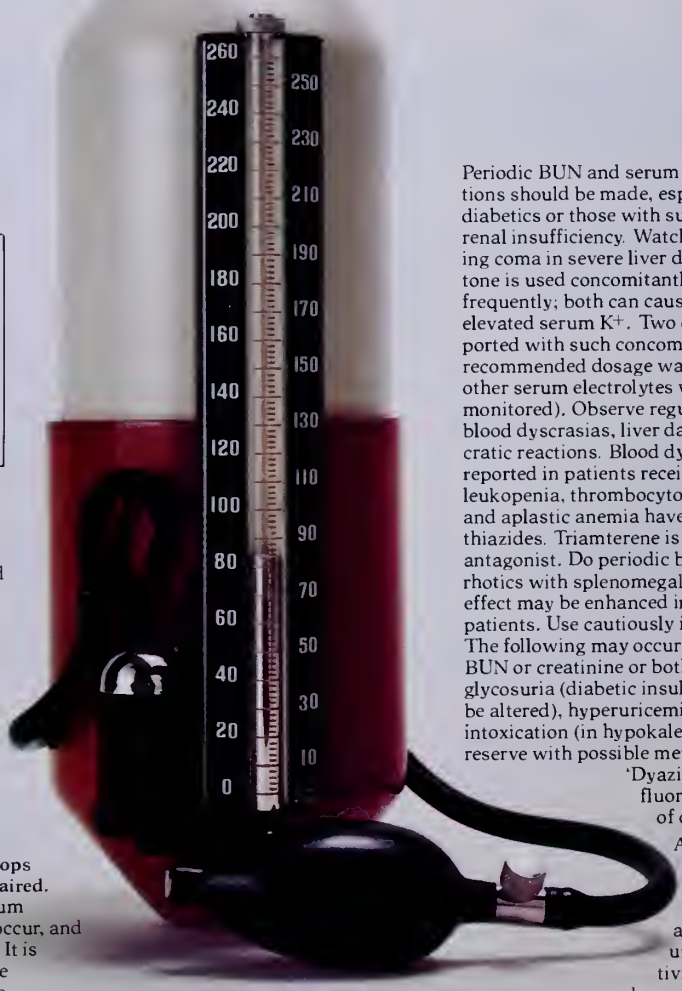
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MAKES SENSE



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

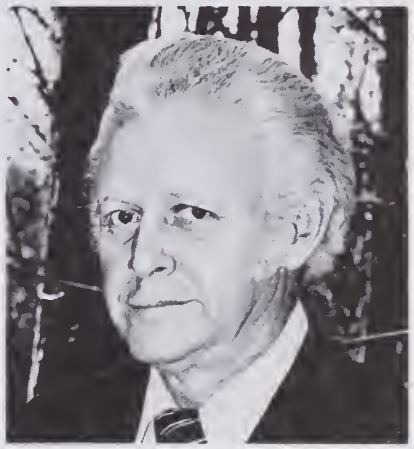
Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

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"Primum Non Nocere"—

("Above All, Do No Harm")

From time to time, my most insistent mistress, or my greatest love, is the practice of medicine. What I see happening to the medical profession and medical care is both satisfying and profoundly disturbing.

This capricious state of mind appears to my perception to be that the profession finally recognizes that the federal government has the power and money to discredit the health care system as it exists, and appears to have the determination to do so.

The encouraging aspect is that physicians generally seem to be recognizing that no segment of the population, consequently no specialty group, will be spared the heavy hand of federal intervention.

Physicians are taking an increasing interest in the socio-economic and political aspects of medicine.

Question: Do you remember the disinterest of some who did not consider themselves threatened by Medicare?

Question: How many of you still feel a sense of satisfaction when the national offices of AMA are roasted by some bright, receptive interviewer?

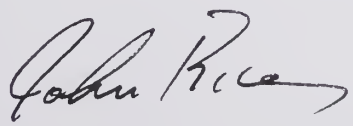
We are living in an age of instant gratification and demand for solutions to problems in health care. And we are finding that politicized medical care is filled with rat holes down which a substantial portion of the nation's resources can be poured.

The insistent cadence of a marching multitude expects their insurance policy to cover their illness. I've grown accustomed to that. What I am having some difficulty with is a new element which is more pervasive, tedious, compromising of principles and honesty. This is called federal guidelines and grantsmanship.

For example, I noted with considerable interest that at a recent "Institute on Delivery of Human Services to Rural People" held within the State, that on two pages listing resource people, not a single one was a rural physician who spent a lifetime delivering care to rural Alabama, an oversight I find almost incomprehensible. Question: Was it a condition of the grant which funded the meeting?

According to a recent financial report in 1900, about 2% of the work force were paper shufflers. Today about half fall in this category; and in 1976, $11 million was spent for paper for copiers. Question: How many paper shuffler hours per patient visit or procedure is really necessary? All of this is reminiscent of the eunuch of the harem. He was there as a facilitator, not as a performer. Every patient is a potential adversary or ally. One could say the same for every taxpayer.

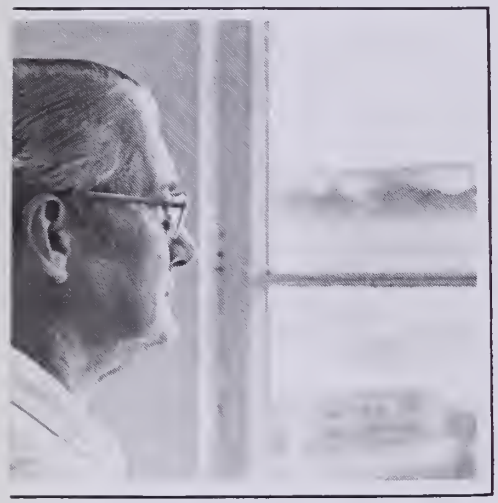
Secretary Califano said in San Francisco the objective of the federal government is to furnish "health care to all at reasonable costs." This must be our objective as well.





RACETRACK

Since August 1969, James L. Hardwick, M.D., and other doctors have been providing a unique emergency medical service at an infield hospital at the Talladega International Motor Speedway. There have been two big races a year in these eight years and many smaller ones. During that time, only two deaths and eight serious injuries have occurred on the track, the world's fastest. But many more injuries from the huge crowds have been treated. One day of Dr. Hardwick's remarkable practice is examined: Aug. 7, 1977.



It was 12:56 p.m., Sunday, Aug. 7.

James L. Hardwick, M.D., who has practiced medicine in Talladega for 31 years, looked out the window of his small hospital located on the infield of the Talladega International Motor Speedway.

The pace car was leading 40 souped-up stock cars around the track, preparing for the scheduled 1 p.m. start of the ninth running of the Talladega 500.

There were 39 men drivers, most of them polished professionals of the NASCAR racing circuit, and one woman—Ms. Janet Guthrie of New York, who had bid fair this season to be named rookie driver of the year.

Some of the cars cost $30,000. The prize money for the race was $205,000.

Dr. Hardwick was apprehensive. His eyes swept the stands. The gates had opened at 6 a.m. He had been in his 40 x 40 concrete block hospital since 8, almost five hours ago. By race time, he had three other doctors with him, one fewer than normal. He also had eight nurses. There were three additional doctors, with nurses, in three aid stations located in the stands. (Tragedy would soon stike, not on the track but in the infield.)

Dr. Hardwick guessed there were 70,000 spectators on hand. Later estimates varied from 65,000 to 80,000, a somewhat smaller crowd than at the other big one in May, the Winston 500. Attendance then was 90,000, a density (considering the racetrack's area of 315 acres, or .492 square miles) of 182,926 people per-square mile, and only one small hospital to serve them.

By way of comparison, the density of Birmingham, where there is a vast array of fine hospitals, is only 3,334/sq. mi.

Off And Running

Dr. Hardwick watched the pace car and the contenders come around again. It was a good start; 40 powerful engines roared deafeningly.

It was 1:06 p.m. and another hard day had begun for the Talladega's racetrack doctor. In fact, it had begun five hours earlier.

Before turning away from the window, Dr. Hardwick said: "I always get nervous when they're bunched up like that. One year, we had a 19-car wreck."

Dr. Hardwick organized the medical team for Talladega in 1969, when the track, the world's fastest, opened. This was his 16th major race — with the two big ones every year in May and August and another 30 or so smaller races — since 1969.

Thousands of miles of races had been run since the track opened eight years ago, but only two drivers had been killed. Another eight drivers had been injured seriously enough to be retired from racing for a couple of months. But it was still a good safety record—better, perhaps, than any interstate.

Dr. Hardwick and the doctors who helped him had earned the reputation of having the best medical racetrack facility outside of Indianapolis, a more famous but considerably slower track.

On any given race day, Dr. Hardwick and his staff would treat more than 100 spectator injuries: heat exhaustion, cuts, contusions, fractures, coronaries.

With him in the hospital Aug. 7 were Drs. Richard F. Bliss, who had practiced in Talladega almost as long as he had; E. H. Roberts, who had been there somewhat longer; and Terry Haws, a newcomer who was considerably younger than the others.

When he started his racetrack medicine in 1969, Dr. Hardwick was assisted by Drs. Bliss and Roberts. The three of them are the last of the original 1969 crew.

But also on hand at one time or another, in the field hospital or at the aid stations in the stands, have been:

Charles R. Lambert, M.D.; Jerry N. Gurley, M.D., both of Talladega; Kirby K. Bryant, M.D., and John F. Hensleigh, M.D., both of Anniston; T. L. Chastain, M.D., Montgomery; John E. Foster, M.D., Foley; and T. L. Sweat, M.D., Corinth, Miss.

By Wm. H. McDonald, Assistant Editor, The Journal

MEDICINE

With the assistance of the eight nurses in the hospital that morning of Aug. 7, Dr. Hardwick had checked out his equipment, supplies, and emergency personnel. The well-provided operating room was supplied with all the drugs, IV solutions, splints, bandages, and the like that he would need. He had an ECG machine and defibrillator. In addition to the OR, he had another treatment room, plus three rest & recovery rooms, with two beds each.

He was in two-way radio communication with eight ambulances around the field and another six standing by near the track with crash crews to extricate and deliver to him any injured driver.

It Was Probably A Bee

Since 8 that morning, in addition to treating minor injuries, he had been checking to make certain that everything was ready.

At 10:40 a.m., he was interrupted by a young woman with a badly swollen hand. Probably a bee sting, Dr. Hardwick concluded after examining her. He directed a nurse to give the woman 50 mg. of Benadryl. No patient, whatever the injury, is ever billed. The Speedway pays the doctors and nurses.

"From 15,000 to 20,000 of the spectators camp out around the track the night before a big race," he said. "The speedway owns or leases 1,800 acres and people camp all around here. They come from all over the country, Canada, South America."

On Saturday night before a race, the woodland around the track is filled with cars, trucks, campers, tents, and all manner of recreational vehicles. Parties are going on everywhere. When the infield hospital opens at 6 a.m. Sunday, a number of injured arrive for treatment. They cut themselves, fall off trucks and campers, break bones, and the physicians spend the day patching them up, triaging the more serious fractures to orthopedic surgeons in Anniston, other cases to Birmingham.

By the time Dr. Hardwick arrives on race day, usually about 8, he has several patients waiting, with a variety of complaints, including the components of hangover in many cases.

Spectators are allowed to drink in the camping areas and they are permitted to bring beer in the stands with them, although no alcohol is sold on the premises. The drinking compounds the medical problems of tending to the needs of so large a crowd for, typically, 12½ hours—from 6 a.m. until the last spectator leaves the area, usually around 6:30 p.m.

Worse Than A Football Crowd

It is a far more difficult medical problem than a football crowd, because the spectators are around longer and, in addition, they are of an entirely different breed.

Wilbur Pickett, M.D., of the Daytona (Fla.) Speedway, heads up a voluntary committee of physicians promoting race track safety. The committee, of which Dr. Hardwick is a member, studies in-depth all racetrack injuries, which are funneled into NASCAR.

The committee attempts to learn how the accident happened and why. One of the most feared accidents is the "T-bone" crash. In this, one car goes into a spin or a slip and a car behind hits him amidships, right where the driver is strapped in.

One of Dr. Hardwick's two fatalities occured this way. The other happened when a driver hit the wall at 190 m.p.h. without his helmet liner. Accidents like this frequently happen, without a scratch, but this time the driver had removed his protection because of the intense heat. In August, temperatures in the car can reach 130 degrees or higher. Some drivers have taken to wearing air-conditioned helmets, to offset the high temperature, which blurs vision and can cause dizziness.

Drivers are supposed to wear Nomax underwear, a fire-resistant synthetic manufactured by DuPont. With it, they can survive a fire for a minute or two, until help arrives. Some refuse to use the protection, because it's too hot.

The fuel tanks, called "cells," are as pliable and as rupture-proof as it's possible to make them. They were developed by Goodyear to minimize explosion and fire hazard.

Drivers are surrounded by roll bars and diagonal braces. In case of fire, they come out fast through the window, if they are conscious.

Electrolyte Changes

During a hot, summer race, such as that Aug. 7, when one track announcer put the track temperature at 155 degrees, a 180-pound driver will lose 10 pounds perspiring—resulting, Dr. Hardwick says, in a severe electrolyte and salt deficiency. This is partially remedied by Gatorade at pit stops and after the race.

Back to Dr. Hardwick's morning before the 1 p.m. start of the race. At 11:40 a.m. he had deployed the ambulances, eight for the crowd, six for the drivers. The ambulances come from Talladega, Anniston and other nearby cities and towns. Most of them are equipped with life-support gear. All have radios and a two-way unit is just outside Dr. Hardwick's hospital office, a small, usually hot room. (The rest of the hospital is air-conditioned.)

Time: *11:40.* Dr. Roberts: "The eyes of the country are on us on a day like this."

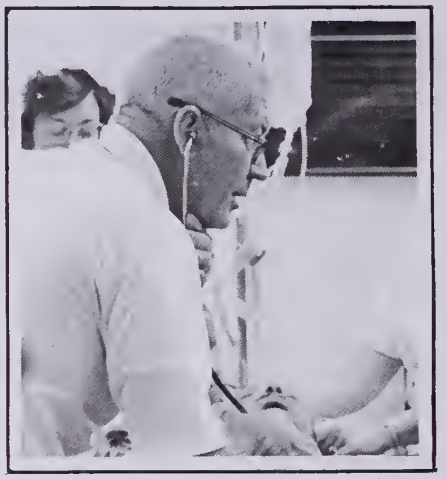
12:05. Dr. Hardwick confers with the helicopter pilot, whose craft is parked on a pad next to the hospital.

RACETRACK MEDICINE



Dr. Hardwick explains that if there is a severe injury—a bad burn case, for example, or other treatment requiring sophisticated equipment and specialists—the victim will be flown to nearby Birmingham, which can be reached by air in a few minutes.

The chopper pilot suggests that he put down on the roof of the 1st Avenue Fire Station in Birmingham, which is close to a hospital. After checking his map, and making sure that the station's elevator can carry a litter down from the helicopter pad on the roof, Dr. Hardwick arranges for an ambulance to be standing by at the Birmingham station.



Make A Tunnel Exit

12:15. Four ambulance drivers enter Dr. Hardwick's crowded office and express the fear that, when the race starts, the gates may be locked near their position. Dr. Hardwick checks his field diagram, locates their position, and instructs them to use the South tunnel under the track if they need to get out fast.

12:25. Dr. Hardwick checks with the South aid station. "Is everything okay, there. Do you have an ambulance yet? Good. If we can help you, let us know." (The North and East aid stations had previously checked in as ready.)

12:30. Dr. Roberts, looking out the window of the small office at the crowd: "The price of seats ($10 to $25) means nothing to someone who comes here from California, Canada or South America...Most of our casualties come from beer-drinking. They all have coolers in the back of their cars. They don't sell it here but they let them bring it in. Somebody gets three sheets in the wind and falls off a camper and breaks an arm or leg. Pretty good fall, six to eight feet."

12:38. Dr. Hardwick makes a final check of the hospital, asks if the OR is ready and whether there are plenty of inflatable splints. Nurses reply affirmatively.

12:42. Dr. Bliss, listening to the two-way radio: "We may have a coronary coming." Dr. Hardwick instructs nurses to stand by and to get glucose ready.

'Just Drunk'

12:46. An ambulance backs up to double doors in front of the hospital and attendants bring in a man naked to the waist, writhing on the litter, incoherent and semi-concious. Blood pressure: 148/90. He is hauled to the operating table, where Dr. Bliss quickly examines him. "Heart sounds perfectly normal," Dr. Bliss says with obvious disgust. "Just drunk." Patient is transferred to one of the rest & recovery rooms, where he sleeps through the entire race. Dr. Bliss returns to his Sunday newspaper.

1:06. The race roars off to a start.

1:08. Dr. Hardwick: "One year, Bobby Allison blew an engine right over there (pointing to a section of the stands). His crankshaft flew up in the crowd, hitting one spectator in the head. It didn't kill him."

1:38. Drivers have completed 38 laps in the August heat. Some are already beginning to drop out, but there have been no serious accidents. Dr. Hardwick begins to relax. He listens closely to a portable radio as the announcer from high atop the stands describes the action.

1:44. Trouble on the track but the exact nature is not clear. The announcer says that last lap had been at an average speed of 192 m.p.h., meaning the cars were probably hitting better than 220 on the back stretch.

1:50. Dr. Hardwick calls in to make certain the evacuation gate is open in case of an emergency.

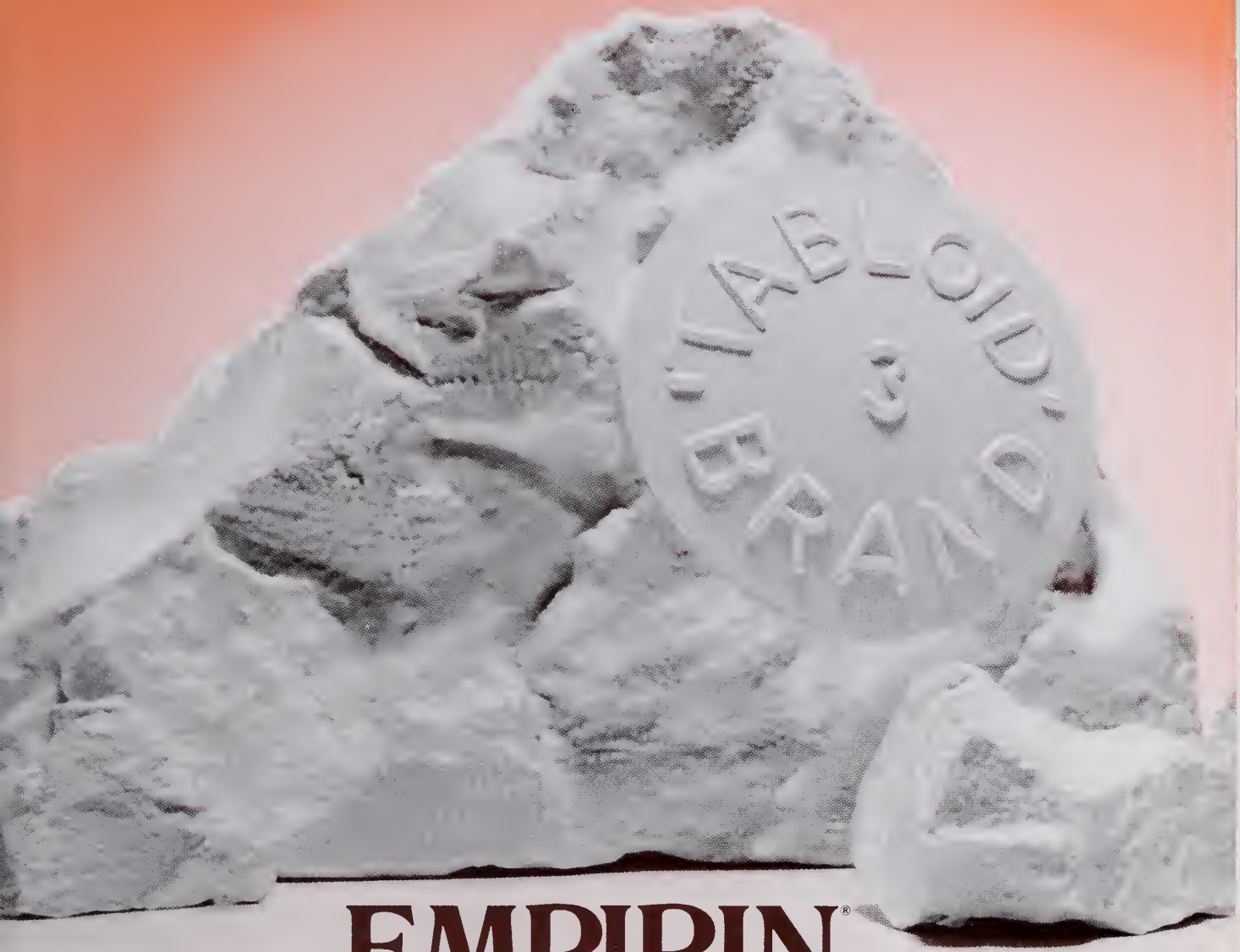
Enter Ms. Guthrie, Patient

1:55. Janet Guthrie, the only woman driver in the race, walks into the hospital, red-faced, soaked with perspiration and in some obvious discomfort. A car in front of her had blown an engine, the drive shaft flying

CONTINUED ON PAGE 40



B.W. CO.® MAKES CODEINE ANALGESICS. YOU MAKE THE CHOICE.



EMPIRIN®
COMPOUND c̄ CODEINE #3

Each tablet contains: codeine phosphate, 32 mg (gr ½), (Warning: May be habit-forming); aspirin, 227 mg; phenacetin, 162 mg; and caffeine, 32 mg. CIII

The classic codeine pain reliever

For decades, Empirin Compound c̄ Codeine #3 has provided potent analgesia plus the anti-inflammatory action of aspirin for consistently dependable pain relief in the majority of your pain patients. Brand name quality at reasonable cost; readily available in hospital and local pharmacies.

Plus CIII prescribing convenience: up to 5 refills in 6 months (where state law permits), and telephone prescribing permissible in most states. See page 3 of advertisement for prescribing information.

NOW...

LOOKING DIFFERENT CAN BE AS IMPORTANT AS BEING DIFFERENT.



Introducing the peach-colored acetaminophen/codeine tablet

EMPRACET™

c̄ CODEINE #3

Each tablet contains: codeine phosphate, 30 mg (gr ½), (Warning: May be habit-forming); and acetaminophen, 300 mg. C-III

Empracet c̄ Codeine #3: non-aspirin/codeine pain reliever for aspirin-sensitive patients

EMPRACET c̄ Codeine #3 offers you an alternative with advantages for your aspirin-sensitive patients, those with bleeding disorders and "...patients undergoing surgical procedures associated with significant blood loss such as tonsillectomies, open heart surgery, and scoliosis repair...."*

NEW LOOK

Not the same old green and black capsule with a "revised formula." Not a white tablet with aspirin-associations. New peach-colored EMPRACET c̄ Codeine #3 looks different from the leading codeine combination products. It doesn't contain aspirin, so it doesn't look like aspirin—imparting greater reassurance to patients leary of taking it by mistake. It also avoids confusion with other tablets in the household.

NEW NAME

Not a household word, the new name may play a positive role in your pain patient's subjective reaction to your prescription.

EMPRACET c̄ Codeine #3. New look. New name. Psychologically more acceptable to your patients. And with CIII prescribing convenience for you—up to 5 refills in 6 months at your discretion (where state law permits), and telephone prescribing permissible in most states.

*Czapek EE: *JAMA 235*:636, 1976.

EMPIRIN® COMPOUND with CODEINE (III)

Contraindications: Hypersensitivity to aspirin, phenacetin, caffeine or codeine.

Warnings: See Warnings below.

Precautions: *Allergic:* Precautions should be taken in administering salicylates to patients with active peptic ulcers and those with known allergies; patients with nasal polyps are especially likely to be hypersensitive to the medication. SEE ADDITIONAL PRECAUTIONS BELOW.

Adverse Reactions: Most frequent adverse reactions are listed below. Some patients taking salicylates develop nausea and vomiting. Hypersensitivity may be manifested by skin rash or anaphylactic reaction. With these exceptions, most side effects occur after repeated administration of large doses; include headache, vertigo, ringing in ears, mental confusion, drowsiness, sweating, thirst, nausea, and vomiting. Occasional patients experience gastric irritation and bleeding with aspirin.

Phenacetin side effects usually result from overdosage. Cyanosis, acute hemolytic anemia, skin lesions, and fever may appear with toxic doses. Continued abuse may lead to renal damage.

Caffeine side effects almost always result from overdosage; include insomnia, restlessness, excitement, tense muscles, and diuresis. Tachycardia and extra systoles may be observed.

EMPRACET™ with Codeine Phosphate, 30 mg, No. 3 (III)

Contraindications: Hypersensitivity to acetaminophen or codeine.

WARNINGS, PRECAUTIONS, ADVERSE REACTIONS AND DRUG INTERACTIONS COMMON TO BOTH PRODUCTS

Warnings: ***Drug dependence.*** Codeine can produce drug dependence of the morphine type and may be abused. Dependence and tolerance may develop upon repeated administration; prescribe and administer with same caution appropriate to oral narcotics. Subject to the Federal Controlled Substances Act.

Usage in ambulatory patients. Caution patients that these products may impair mental and/or physical abilities required for performance of potentially hazardous tasks such as driving a car or operating machinery.

Interaction with other CNS depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, tranquilizers, sedative-hypnotics, or other CNS depressants (including alcohol) may exhibit additive CNS depression; when used together reduce dose of one or both.

Usage in Pregnancy. Safe use is not established. Should not be used in pregnant patients unless potential benefits outweigh possible hazards.

Precautions: ***Head injury and increased intracranial pressure.*** Respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute abdominal condition. These products or other narcotics may obscure the diagnosis or clinical course of acute abdominal conditions.

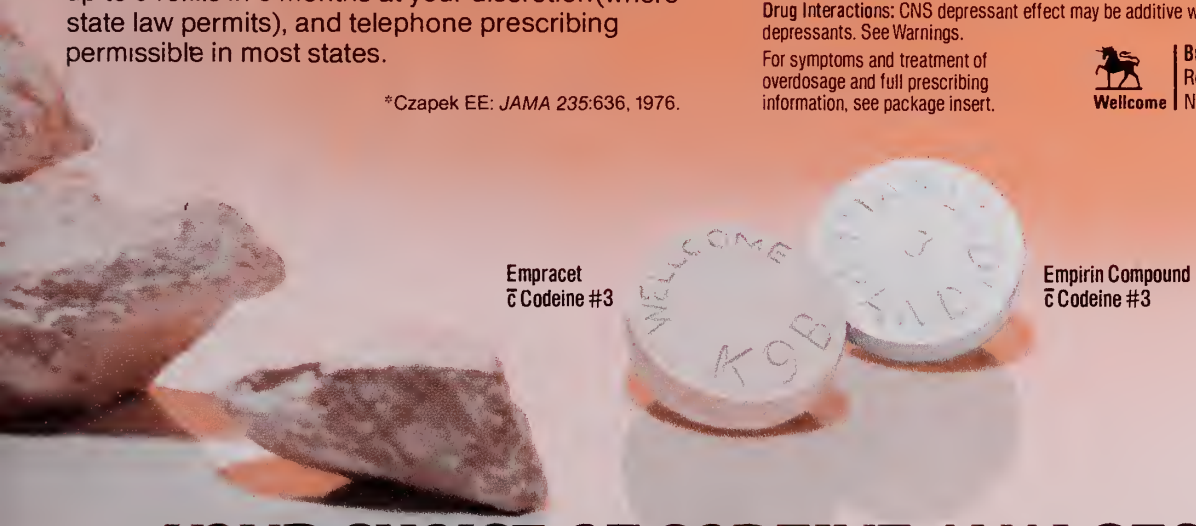
Special risk patients. Administer with caution to certain patients such as elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, or prostatic hypertrophy or urethral stricture.

Adverse Reactions: Most frequently include lightheadedness, dizziness, sedation, nausea, and vomiting; more prominent in ambulatory than in nonambulatory patients; some may be alleviated if patient lies down; others include: euphoria, dysphoria, constipation and pruritis.

Drug Interactions: CNS depressant effect may be additive with that of other CNS depressants. See Warnings.

For symptoms and treatment of overdosage and full prescribing information, see package insert.

Wellcome | **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709



Empracet c̄ Codeine #3

Empirin Compound c̄ Codeine #3

YOUR CHOICE OF CODEINE ANALGESICS FROM BURROUGHS WELLCOME CO.

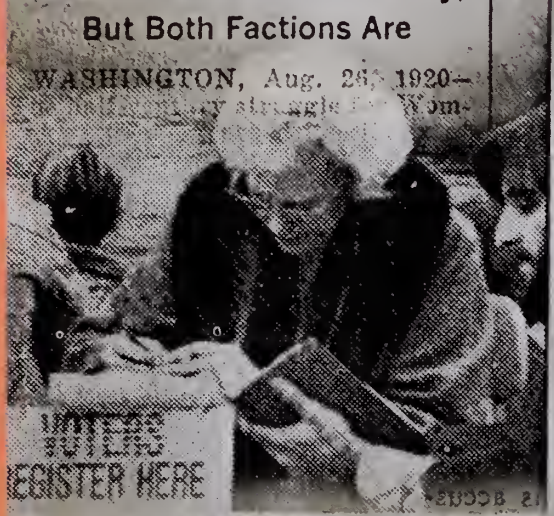
COLBY PROCLAIMS WOMAN SUFFRAGE

Signs Certificate of Ratification at His Home Without Women Witnesses.

MILITANTS VEXED AT PRIVACY.

Wanted Movies of Ceremony, But Both Factions Are

WASHINGTON, Aug. 26, 1920—



Social Security Bill Is Signed, Gives Pensions to Aged, Job

Roosevelt Approves Message Intended to Benefit 30,0 Persons When States Adopt Cooperating Laws–He the Measure 'Cornerstone' of His Economic Progr

WASHINGTON, Aug. 1
The Social Security Bill, p
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SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today 94 to 0 and sent

TRUMAN CLOSES TED NATIONS CONFEREN ITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can

SIGNI the Dra Ends No

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after re-

PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST., N. W., WASHINGTON, D. C. 20005



DEAN'S REPORT

James A. Pittman, Jr., M.D.,
Dean, School of Medicine,
University of Alabama in Birmingham

Competition,

October 29, 1976, I attended an interesting meeting in New York sponsored by the Macy Foundation. It was a small group of 26 people convened at The Century Club to discuss the topic: "Allocation of Residencies: Roles and Responsibilities of Participating Organizations."

Discussants from the administration, the General Accounting Office, the Institute of Medicine, the CCME (Coordinating Council on Medical Education), LCGME (Liaison Committee on Graduate Medical Education), American Hospital Association, American Medical Association, and others debated the general topic of enforcing specific numbers of residency training programs in specific hospitals around the United States.

For example, if Alabama were seen as having a relative shortage of tertiary care specialists as compared with general physicians and family practitioners, and as compared with places like San Francisco and New York City, a federal commission might be empowered to allocate specific numbers of residencies around the state "to redress the imbalance." Presumably in that circumstance, the number of family practice residencies would be forcibly reduced (e.g., by denial of third party payments, certificates of need, etc.) in this area, while an increase in the number of neurosurgical or psychiatric residencies might be dictated by the Commission.

This is not such a far-fetched example. The proportion of Alabama physicians who were "primary care physicians" in 1974 was 50 per cent, while Alabama ranks last among the 50 states and the District of Columbia in psychiatrists per capita.

At the annual meeting of the American Medical Association in June 1977, Mr. Califano, Secretary of DHEW, berated the physicians for being part of an inefficient system "which is virtually noncompetitive" and looks first and foremost after the interests of the physician rather than the patient[1]. He had previously stated that there will ultimately have to be controls put on physicians' fees[2], as well as on expenditures for expensive facilities and equipment.

In other words, many, perhaps most, of the aspects of the medicine we have been practicing with little interference are rapidly coming under increasing governmental controls and the threat of still more controls.

Why is this so? One reason is certainly the escalating cost of medical care, which the public feels the profession cannot or will not control, but which is in large part the result of governmental initiatives in providing health care. For example, here in Alabama the state government is busily mandating family practice residencies in small towns which cannot reach levels of activity and certification sufficient for accreditation without expenditure of huge amounts of money, and the federal government is pursuing a parallel course with other programs. The Alabama bill to establish an Advisory Board for Family Practice might have exerted some restraining and beneficial influence on these unrealistic plans locally within the state; but it was not passed.

Another reason for mounting controls, in addition to cost escalation, is that many people in influential positions simply do not trust doctors any more, if they ever did. Sometimes such distrust takes on a spiteful, vindictive attitude. In other situations it appears simply as a neutral "statement of fact." At the Macy Foundation Conference just mentioned, a respected health economist stated that, "as everybody knows, the health care system simply is not subject to the usual market forces."

When one tries to examine the working of market forces in the provision and cost of medical care, the situation becomes murky. On the airplane home from the Macy meeting, I sat next to an advertising manager. He told me something I had heard other advertising men say: "Just give me sufficient money for a big campaign — say, several million dollars — and I'll convince everybody that they absolutely *must* have a Brand X toaster. They'll not just feel they *need* it; they'll feel they *have* to have it, particularly after you get over the hump and most people have it."

The case with automobile transportation is perhaps more vivid. How many Americans at this moment feel they could get along fine with no car? Obviously, statements by physicians, particularly through organizations such as the American Heart Association or American Cancer Society, exert a considerable controlling influence on the demand for health care services. Recently there has been a campaign publicizing the hazards of a patient's developing thyroid carcinoma following irradiation of the head and neck. Such radiation therapy was frequent some 30 years ago for treatment of large tonsils and adenoids, or before that for "status thymolymphaticus." In the prior 20 years I had seen one patient for such evaluation, but recently I have seen three. There is no doubt that our advertising is better and more controlling than even that of the man selling the toasters.

But that is on the demand side. How about the supply side? Here is where we appear particularly vulnerable. Not only do various commissions and governmental bodies

Cooperation, And The Patient

declare that it cannot be left to physicians to make changes they perceive as needed (e.g., P.L. 93-641), but anecdotal evidence indicates that in at least some cases they may be right, and it is unreasonable to expect physicians to add to their own problems in practice, as physicians see them.

I recently was invited to a meeting at a small rural hospital to discuss the recruitment of physicians to that area. I drove to the meeting with two others from the dean's office at UAB armed with data, statistics, and offers to set up meetings. We were met at the hospital by several local businessmen, an automobile dealer, head of the local newspaper, the mayor, the postmaster, and several others. There were no physicians present, although there were six based right in the little town and practicing. After refreshments we toured the hospital (which had had an occupancy of less than 40% over the preceding year).

A member of the hospital board of trustees pointed out the nice doctors' lounge and library. He also pointed out that they had gone to some expense to cut a door in the back of the library so as to make it easy for the doctors to enter from the parking lot. He commented then, "We really pamper these doctors. But when we get a few more, we're going to quit pampering them!" He was having difficulty containing his hostility for what he saw as a profession unresponsive to his needs and those of the local populace.

As we continued our tour we passed the emergency room, complete with two fully equipped ambulances. There were a number of patients there, and several nurses, but no doctors. Another of our hosts commented, "It's tough to get the doctors to come in at night. The nurses can handle most of the problems, though." Thus, we should not be surprised if some of the tasks traditionally the prerogative of physicians are taken over by nurses, pharmacists, optometrists and others with a better public relations image of dedicated service.

One of our hosts was an automobile dealer, and when it was suggested by someone that "maybe the government could get some doctors in here" (remember, this is a town which already has six physicians), I asked the dealer, "Suppose the government decided the people here do not have enough access to purchasing cars. They might mandate another dealer here, maybe a Pontiac dealer. But to come up to some national average, they would need a couple more, so they'd add a Chevrolet dealer and a Ford dealer. How would you like that?" He did not think he would like it very well.*

Well, do "the usual forces of the marketplace" apply in medicine or not?

A more recent example follows. A graduating resident at UAB wrote, in the spring of 1977, about a dozen county medical societies in the states of Alabama, Georgia, Mississippi and Louisiana. The letters were addressed to the President of the Society, and the Alabama addresses were obtained from the Roster for 1977 published by the Medical Association of the State of Alabama. Now this is a graduate physician seeking a place to enter practice in Alabama. He is from Alabama and would like to remain here in practice. *There was not even one answer from any Alabama county medical society!* I have personally interviewed this resident, who says "It looks like Alabama is fairly full." I am personally convinced that his complaint is accurate.† This sort of behavior of physicians toward physicians does promote the image that our accusers have some truth on their side.

There are a number of other towns around Alabama in which the established physicians have apparently rebuffed attempts of younger physicians to start practices there. Of course, I usually hear only the side of the young physicians trying to enter practice. But the occurrences are sufficiently frequent to have prompted one recent public health official to state that "a major reason for failure of young physicians to start practice in rural communities is the resistance of physicians already in the area."

I must emphasize that this perception comes from the physicians themselves, not the lay public so concerned about controlling our practices. It is hardly surprising, when physicians themselves voice these complaints, that governmental bodies see "taking control of the system so it will serve the patient first" as a fertile political area.

Resource Partitioning In Medical Care

What is the answer? How can society distribute resources so as to, first, serve the patient, and, second, keep the professionals viable, proficient, and eventually in the profession? One possible answer may be in *resource partitioning*[3]. This term translates in the practice of medicine to *specialization* and *regionalization;* in other words, how to keep out of each other's hair. Not that everyone will be happy with these, but perhaps they are

*If the car dealer analogy is to be applied to medicine, the newly mandated dealership would have to be for Cadillacs and Lincoln Continentals, but at the price of Volkswagens.

†He received answers from several societies written in Mississippi and Georgia, and he plans to enter practice in one of those states.

preferable to intra- and interprofessional warfare (i.e., between physicians, nurses, optometrists, pharmacists, dentists, and podiatrists). And perhaps there is yet time for implementation of these, or some such changes, by the profession before total control of the practice of medicine by non-physicians occurs.

Listen to what T. W. Schoener, a biologist and a pioneer in studies of resource partitioning, says: "Biologists have long been intrigued by differences in morphology and habit among closely related species, for to comprehend the manner and extent of such differences is to comprehend much of the natural control or organic diversity. Ecologists especially have concentrated on differences in the way species in the same community utilize resources. Studies of this resource partitioning are currently enjoying great popularity.... The major purpose of resource-partitioning studies is to analyze the limits interspecific competition place on the number of species that can stably coexist. That such limits exist was suggested by the mathematical models of two early 20th-century theoreticians, Lotka and Volterra. The idea was supported by experiments of Gause and later workers on simple organisms in laboratory containers, in which similar species tended to cause one another's extinction. The infusion of models and data crystallized into the Gause principle, one version of which states that species cannot coexist for long if they too similarly use the same kinds of resources. The application of this idea to natural communities, however, was begun primarily in the 1940's during the time of the New Systematics. Although at first interested in differences between species that might ensure reproductive isolation, evolutionists quickly seized upon the idea of reducing competition as an alternative rationale for those differences."

Population perturbation experiments done by students of resource partitioning have demonstrated the effect of one population on another, and additional experiments are currently aimed at revealing the mechanism of the competition. "For example, one species may reduce the abundance of a second in a particular habitat by directly depleting its resources, by interfering with its ability to obtain those resources, or by using up in aggressive encounters energy obtained from those resources."

Schoener's last comment, about increasing use of resources for aggressive encounters, reminds one of the discussion of "time-energy budgets" in animal populations by E. O. Wilson in his book *Sociobiology*[4], one paraphrase of which might be that when an increase in density of individuals occurs, the amount of resources available to each is reduced by an amount which exceeds the reduction from simple division among more individuals. The amount of energy, and especially the amount of time, available are constant. As population density increases, a greater proportion of a smaller absolute amount (individual's portion of the total) is consumed in combat and defense of one's territory, thus leading to a marked reduction in resources available for other activities.

If these analogies are too arcane, try one from the literature on endocrines and population by J. J. Christian[5]: "Thus, some density-dependent 'damping factor' regulates and limits population growth, usually to some level well below environmentally imposed limits. However, a deficient essential environmental substrate, such as food or dwelling sites, occasionally may limit the growth of a population at some level below that which would be imposed by density-dependent negative feedback.... Behavioral social conventions have evolved to substitute for direct competition.... Social hierarchies, territoriality, and combinations of these appear to be the evolved 'conventions' for most vertebrates." Christian then goes on to discuss *intra*specific competition and population control via endocrine mechanisms.

Whether any analogies of the above with the practice of medicine are helpful or are misleading, I leave to the reader. However, some parallels do come to mind. The "closely related species" competing for resources mentioned by Schoener remind one of the various medical and paramedical specialties. The question in his discussion was essentially, "Why are there so many kinds of animals?" just as one might ask, "Why are there so many kinds of doctors?" His response was to examine how the various species came to be; and his answer was "resource partitioning." The statement that "species cannot coexist for long if they too similarly use the same kinds of resources" brings to mind the battles between ophthalmology and optometry, internal medicine and family practice, nurses and clinical pharmacists who want to distribute drugs in the hospital.

In these circumstances, either they stop trying to coexist, or one or both undergo transformations which are equivalent in the health professions to species changes in zoology. The taxonomy may not be so different in the two cases. Certainly, there are substantial groups of government bureaucrats, scholars, organizations, and committees spending lots of money studying the taxonomy of the health professions in the U.S. today, whether or not they call their studies that.

Christian's discussions, which involved largely studies of mice and marmots, both captive and wild, recalled the rather obvious point that populations, when the density increases excessively, can be reduced in three ways: decreased natality, increased mortality, and out-migration. He also cited evidence to show that species-wide over-population could cause extinction of the species. It seems unlikely that the species of health care providers called "physicians" will become extinct, although there have been periods in which physicians left the profession, either temporarily or permanently, because of inability to earn a living by practicing medicine.

This was particularly true in the early 1930's[6]. And Tinsley R. Harrison's grandfather, who practiced medicine in Talladega around 1870-90, farmed to make a living while he practiced medicine[7]. It seems likely that in the decades ahead there may be more "out-migration of physicians." There is little doubt that there will be a marked increase in physician density in Alabama and throughout most of the United States in the years ahead. The most troublesome aspect of this is that we, the physicians, may expend exorbitant amounts of time and energy in "aggressive behavior," thus not only blunting the social and profes-

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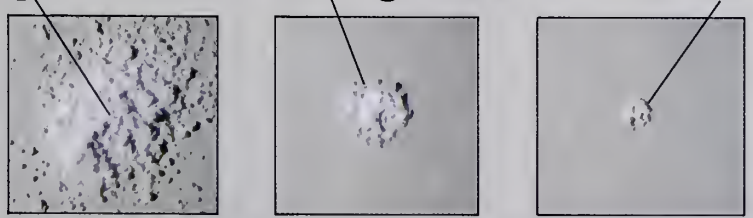


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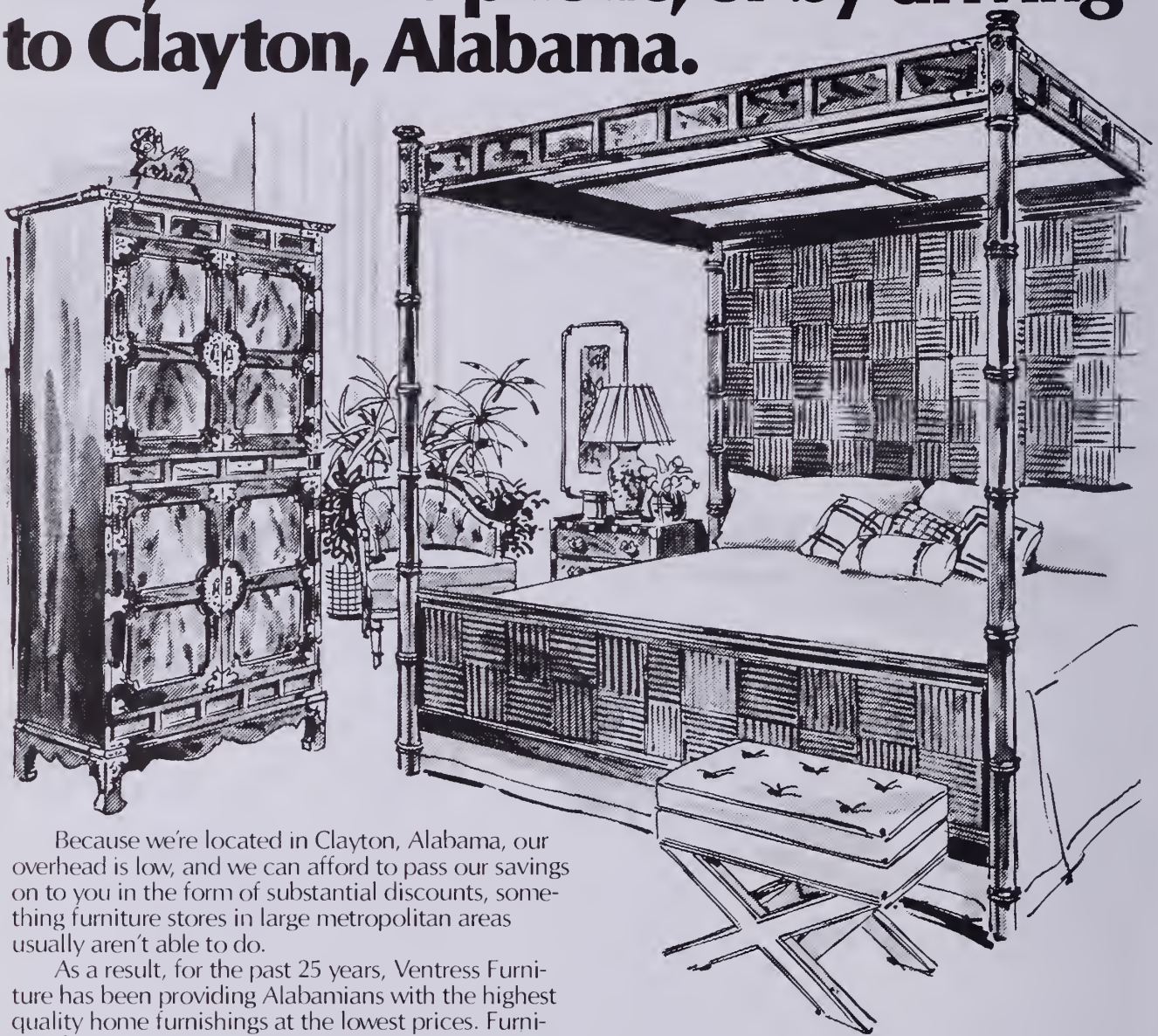
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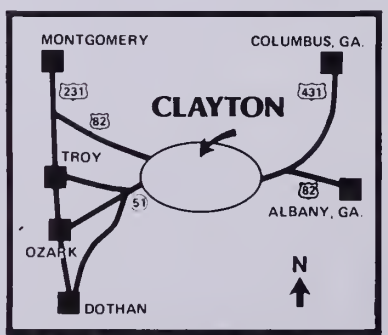
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CONTINUED FROM PAGE 20

sional goals of improved service but demeaning the profession in the process.

How can such "aggressive encounters" be minimized? Perhaps by resource partitioning. In defining the term "resource" as it applies to physicians and medical practice, the public usually thinks simply of the money spent for physicians' services, or perhaps includes also that expended at the discretion of physicians in providing facilities, tests, equipment, etc. for their patients. The public tends to reduce "resources" to "money," particularly that going to the physician personally[8]. The physician, on the other hand, is more likely to think in terms of "patient populations available." As pointed out in the recent report by the National Academy of Sciences[9], those cardiovascular surgery centers with small patient populations and low levels of activity tended to have high mortalities and morbidities; while those with large patient populations had good results.

The term "load focusing" has been used to denote the need for focusing the care of patients with less common diseases in a few centers[10]. Similarly, the argument can be made that University Health Sciences Centers, which include most of the major medical school centers in the U.S. today, generate tertiary care technologies through biomedical research, and should not try to provide much routine care but should leave that to the community at large. In this manner they would "partition resources" and stay out of each other's territory. They would specialize. If this idea is accepted, then the community at large will have to participate to a much greater extent than it does now in the education of medical students, (and perhaps other health professionals such as nurse practitioners and optometrists as well), since most medical students must be thoroughly grounded in primary care and most will be expected to provide some amount of primary care.

One alternative is for University Health Sciences Centers to undertake more research on delivery of medical care; but that idea has not yet taken hold and may not be feasible within the tertiary care medical center itself, except in a restricted sense.

All of which is to say that if we all try to do the same thing in the same place, we are going to waste a lot of time and money fighting and be taken over by the feds. The State Committee of Public Health has tried to initiate a study of the regionalization of hospital services in Alabama[11], but the Alabama Hospital Association and its members do not appear to be rushing with wild enthusiasm toward this prospect, and P.L. 93-641 may complicate the matter. Increasingly, a similar reluctance appears to exist in Britain[12]. They'd rather fight than switch.

One thing I've learned working in the dean's office is that, given the alternative options of either cooperating or fighting, people will choose fighting almost every time. After all, it's easier. Cooperation requires not just good will, but intelligence, insight into large issues, and a considerable amount of effort.

Things, however, haven't changed much since Ben Franklin remarked to John Hancock some 200 years ago, "We must all hang together, or we shall all hang separately." Hopefully, we are men, not mice, and are therefore able to take advantage of Mr. Franklin's advice.

Time will tell. ●

REFERENCES

1. Califano, J. A., Jr.: What's Wrong With U.S. Health Care. Washington Post, Outlook, section B, p. B 3, June 26, 1977.
2. Califano, J. A., Jr.: Califano Foresees Some Kind of Control of Physicians' Fees. Washington Post, Wednesday, June 8, 1977, p. A 8.
3. Schoener, T. W.: Resource paritioning in ecological communities. Science, 185:27, 1974.
4. Wilson, E. O.: SOCIOBIOLOGY: THE NEW SYNTHESIS. Harvard University Press, Cambridge, Massachusetts, 1975.
5. Christian, J. J., Lloyd, J. A., and Davis, D. E.: The role of endocrines in the self-regulation of mammalian populations. Recent Progress in Hormone Research, 21:501, 1965.
6. Fenninger, L.: Personal communication.
7. Harrison, Tinsley R.: Personal communication.
8. Peters, Charles: A Radical cure for high medical costs. Newsweek, March 28, 1977, p. 11.
9. National Academy of Sciences: Study of Health Care for American Veterans. Senate Committee Print No. 4, 95th Congress, 1st Session. Washington, D.C., U.S. Government Printing Office, 1977.
10. Pittman, J. A., Jr.: Titanic. J. Med. Assn. St. of Ala. 46:35-36 passim, 1977.
11. Alabama State Committee of Public Health, Minutes of the meeting of August 18, 1976.
12. Dudley, H.A.F.: Loosening patient mobility. Lancet 1:1251, 1977 (June 11).

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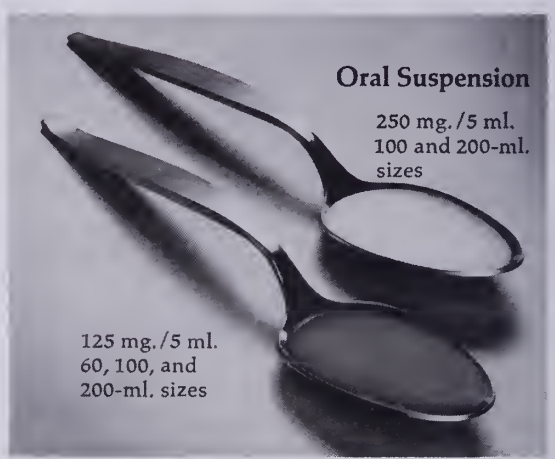
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Jejuno-Ileal Bypass For Morbid Obesity Long-Term Follow Up Of 200 Cases

G. A. Lemmon, M.D.,
Birmingham, Alabama

Surgical Bypass of most of the small intestine to bring about weight reduction in cases of intractable obesity is being performed more and more frequently across the country. There have been an estimated 20,000 cases done in the last 20 years since Dr. Payne originated this procedure. There still exists a great amount of controversy and misunderstanding in the medical profession regarding the results of the Bypass. I would like to report the long term follow up of 200 personal cases followed from one to six years.

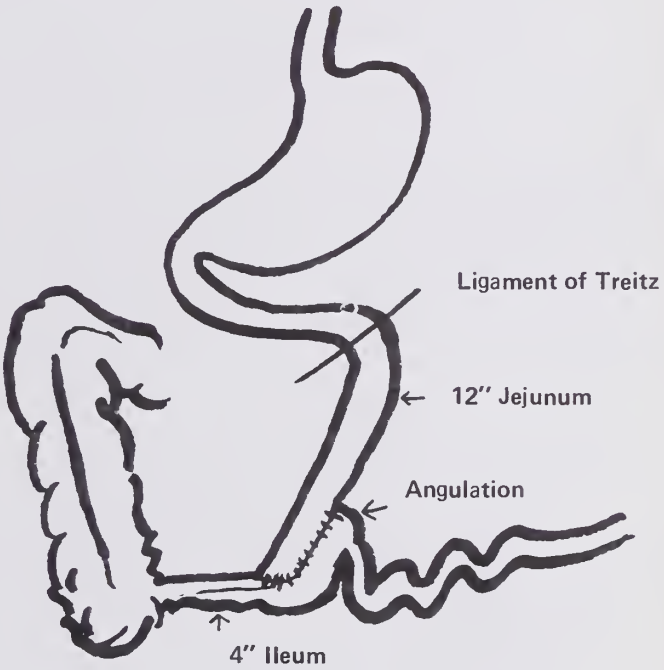
To be eligible for the Bypass a patient had to be at least 100 to 125 pounds overweight, usually at least twice their normal size. Many of the patients had begun to suffer some of the ravages of obesity and had developed hypertension, diabetes, cholelithiasis, hypercholesteremia or other diseases frequently associated with obesity. They ranged in age from 18 to 56. Women outnumbered men by 8 to 1 and white over black by 20 to 1.

Pre-operative study included a complete chemistry profile (SMR-17), thyroid profile, lipid profile, chest x-ray, EKG, CBC, urinalysis and a careful history and physical examination. Every effort has been made to exclude those who are not emotionally stable although a routine psychiatric consultation has not been found to be very helpful or feasible. Patients must agree to a long term follow up and to give up alcohol for at least one year. I also make them quit smoking for at least a month before operation. More recently a cholecystogram and an IVP have been made part of the routine work up. Some of the reasons patients have been turned down for this operation were: (1) Enlarged heart with episodes of failure. (2) History of hepatitis with impaired liver functions. (3) Too old and/or too young. (4) Less than 100 pounds overweight. (6) Incompetent anal sphincter due to previous surgery.

If liver enzymes were elevated, a needle liver biopsy was done before the decision was made whether to accept them or not. A history of mental illness was not a contraindication provided they were referred by a psychiatrist who agreed to follow them with me after operation.

Patients accepted for surgery were admitted to the hospital a few days early where every effort was made to prevent wound infections. A bowel prep is essential as well as careful scrubbing of the abdomen, under the folds and aprons of fat with Phisohex.

There are two types of jejuno-ileal bypasses most frequently performed. The original Payne operation was end to side 14 inches of jejunum to 4 inches of ileum.[1] The so called Scott operation was end to end 12 inches of jejunum to 6 inches of ileum.[2] Scott and others felt that



End to side 12" jejunum to 4" ileum with angulation.

weight loss was more certain with the end to end because of the possibility of reflux into the bypassed ileum allowing greater absorption of food. There have been other reports indicating that there is very little difference as far as weight loss is concerned between the two operations.[3] I did some of each in the early part of this series but I now do a modification of the Payne end to side procedure. This consists of anastomosing the end of the jejunum 12 inches from the ligament of Treitz to the side of the ileum 4 inches from the ileocecal valve and then sharply angulating the ileum just proximal to the anastomosis by suturing it to the jejunum for a distance of about 3 inches. This greatly minimizes any reflux, as can be demonstrated by barium x-ray studies. The end to side operation is easier, quicker and less prone to complication than the end to end. The appendix if present is routinely removed, as is the gallbladder if it contains stones.

The post operative course is essentially the same as any intestinal resection. Bowel movements usually begin about the third or fourth post operative day at which time naso-gastric suction is discontinued and oral feedings begun. They move rapidly from liquids to a low fat diet and the average patient goes home from the hospital on the seventh post operative day.

Table 1. – Early Complications

	Number	Per Cent
Deaths	0	0
Leakage of anastomosis	0	0
Peritonitis or abdominal abscess	0	0
Dehiscence or evisceration	0	0
Wound infections	13	6.5
Pulmonary emboli	2	1.0
Pneumonia	2	1.0
Post operative obstruction	1	0.5
UGI hemorrhage	2	1.0

Table 2. – Late Complications

	Number	Per Cent
Arthritis	5	2.5
Anemia	4	2.0
Anal problems requiring surgery	20	10.0
Incisional hernia	10	5
Metabolic & electrolyte problems	22	11
Liver, fatty degeneration	16	8
Urinary tract stones	30	15
Pulmonary emboli	5	2.5
Malnutrition & vitamin deficiency	12	6
Cholelithiasis	8	4
Intussusception	3	1.5

Patients who had complications tended to have multiple ones.

Table 3. – Bypass Reversal and Revision

	Number
A. Complete reversal of Bypass	8
1. Severe liver failure	3
2. Severe arthritis	2
3. Excessive weight loss, malnutrition (continunity completely restored instead of lengthening at patient's request)	1
4. Reversal done elsewhere – reportedly because of intestinal infection	1
5. Recurrent kidney stones	1
B. Revision (lengthening of Bypass)	10
1. Excessive weight loss, malnutrition, metabolic and electrolyte imbalance	6
2. Intractable diarrhea	2
3. Weak spells and dizziness (normal lab work – exact cause of spells unknown)	1
4. Revised at time of operation (Vagotomy and Pyloroplasty for bleeding ulcer with associated hepatitis and pancreatitis)	1

Early Complications

Early complications have been few (Table 1). There have been no deaths, no leakage of anastomoses, no peritonitis or intraabdominal abscess, no dehiscences or eviscerations. There has been 13 wound infections. The most common organism was Bacteroides. Others were Staph, E coli and Klebsiella. There have been two massive pulmonary emboli both occurring at time of surgery. Fortunately both survived although they had to be ventilated and anticoagulated. One had a venacaval umbrella inserted. There were two post operative pneumonias. One post operative intestinal obstruction due to adhesions in a patient who had had multiple operations prior to the Bypass. This required reoperation. There were two UGI hemorrhages both due to stress ulcer. Neither required reoperation, although one required six bottles of blood.

All patients have diarrhea but the amount and severity varies greatly. This can usually be controlled by limiting what they eat or drink. They are advised not to drink too much water or any ice cold drinks and to eliminate all fatty and fried foods. Only occasionally will the patient need Lomotil or Paregoric.

Late Complications

Late complications have been many and varied and are chiefly associated with the physiological changes brought about by lack of absorption of many essential nutrients and by the diarrhea which is frequently severe. Approximately 20 per cent of this series had problems severe enough to require readmission to the hospital at least once, some of them multiple times (Table 2). Some of the causes of these readmissions are: metabolic and electrolyte imbalance, fatty degeneration of liver, urinary tract stones, pulmonary emboli, hemorrhoids and fissure and other anal problems, vomiting, severe diarrhea, incisional hernia, intussusception of closed stump of jejunum.

Metabolic and Electrolyte Imbalance

These problems are usually caused by excessive diarrhea and/or vomiting and failure to eat properly. All patients are followed closely for the first few months and chemistry profiles checked frequently with the hope of detecting and treating these problems in the early stages. The patients are encouraged to try to control their diarrhea by dietary measures such as avoiding ice water or other cold drinks which frequently act like a dose of salts on Bypass patients. Fried and fatty foods must be avoided also. A typical profile would show a low protein, low albumin, low calcium, low potassium, abnormal CO_2 and elevated liver enzymes. A few days in the hospital with IV fluids, replacing potassium and calcium, and multiple vitamins will usually work wonders.

Fatty Degeneration of Liver

Most grossly obese people already have a fatty liver at the time of the Bypass as proven by multiple liver biopsies. A mild elevation of liver enzymes during the period of rapid weight loss is quite common. However, a progressive deterioration of liver function studies associated with enlarged liver, mild jaundice and sometimes ascites is cause for great concern. These patients should be admitted to the hospital and treated with high protein diet (if they are able to eat as most have no appetite and frequently vomit), IV fluids, massive vitamin therapy, and hyperalimentation, and

of course liver biopsies. If they fail to respond promptly to these measures they should have the Bypass reserved.

Urinary Tract Stones

Urinary calculi have become the most common complication of the Bypass. The theory for this, greatly simplified, is there is a malabsorption of fatty acids in Bypass patients. These fatty acids combine with calcium in the gut. The oxalate which would normally have combined with the calcium is reabsorbed and excreted in the urine causing hyperoxaluria which is the precursor of calcium oxalate kidney stones.[4] This problem is much more common in Bypass patients in the Southeast possibly because we drink more cola drinks (which are high in oxalate) than anywhere else in the nation.

Hemorrhoids, Fissures and Other Anal Problems

The severe diarrhea causes severe anal symptoms particularly in patients having preexisting anal disease. Every effort is made to treat conservatively with suppositories, sitz baths, etc., but some have to be treated surgically.

Arthritis

Arthritis is a rather rare complication of the Bypass surgery but can be quite disabling. One theory is there is an intestinal bacterial overgrowth, the formation of cryoglobulins and antibodies and the precipitation of antigen-antibody complexes in the joints. At any rate antibiotics usually benefit these symptoms.

Intussusception

Even when the closed end of the jejunum is carefully anchored—intussusception can rarely occur. I have operated on five of these, three in my own series and two others where the Bypass was performed by another surgeon. It is impossible to diagnose this by x-ray or other means. It should be suspected in any Bypass patient who develops severe abdominal pain for which no cause can be found. The pain is usually intermittent at first and there may be pain free intervals. As it progresses a mass may be felt and if it becomes gangrenous there will be leukocytosis and fever. This is a very impressive sight at operation particularly if it has become gangrenous. It is usually not possible to reduce the intussusception and it will have to be resected and the closed end reanchored.

Reversal or Revision of Bypass

If the post operative problems persist or progress in spite of everything that can be done, the Bypass can either be lengthened or completely reversed.[5] It should be completely reversed in cases of progressive liver failure and severe disabling arthritis. All other problems can be corrected by merely lengthening the Bypass by adding an additional 14 inches of ileum or converting the Bypass to 12 inches of jejunum to 18 inches of ileum end to side. This has been done in cases of excessive weight loss, malnutrition, unmanageable electrolyte and metabolic problems, intractable diarrhea and recurring kidney stones (Table 3).

The addition of 14 inches of ileum to the digestive tract causes rather immediate and surprising improvements. The diarrhea stops, protein and albumin and calcium and electrolytes revert promptly to normal values, liver enzymes improve and the patient quickly gains some weight. However, they are less likely to gain all of their weight back.

Table 4. – Deaths

Patient Age	Sex	Initial Weight	Interval Post Operative	Cause
23	F	303	3 1/2 years	Multiple surgeries, Pancreatitis, hepatitis, Bleeding ulcer
49	F	365	4 months	Staph abscess of buttocks and axillae and septicemia
48	F	428	20 months	Septic pulmonary emboli and lung abscess
45	F	242	1 1/2 years	Liver failure
28	F	355	15 months	Unknown
28	M	331	6 weeks	Pulmonary embolus

All of the patients were autopsied.

Reversing or revising the Bypasses has proved to be a more hazardous operation than the original Bypass itself. The patient is usually a poor operative risk with depleted protein, abnormal liver functions, malnourishment and vitamin deficiences. They should be prepared for surgery with great care, with hyperalimentation, vitamin, electrolyte and protein replacement and bowel prep. Massive adhesions are frequently encountered at these secondary operations.

Deaths

Six of the 200 Bypasses followed from one to six years have died. This represents a three per cent long term mortality (Table 4).

One patient died of liver failure. The patient herself refused to have the Bypass reversed until it was too late. The Bypass was reversed about one and a half years post operative. Fatty degeneration had already changed to cirrhosis and liver functions continued to deteriorate resulting in a long drawn out death.

Two patients died of pulmonary emboli. One had a massive embolus at home six weeks post operative. The other died one and a half years after the Bypass from multiple septic emboli and lung abscesses. She had had long term chronic phlebitis and post phlebitic syndrome.

One patient died of sepsis four months after the Bypass. She had staph abscesses of buttocks and axillae leading to overwhelming septicemia. The infection was not connected with her Bypass but her resistence was undoubtedly lowered by severe metabolic and electrolyte problems following the Bypass.

Another patient died at another hospital while they were attempting to reverse the Bypass. She had multiple other problems secondary to an acute hemorrhagic pancreatitis, active hepatitis and bleeding duodenal ulcer and had had multiple abdominal operations.

The last patient died fifteen months after the Bypass. She had moved away and was lost to follow up and I don't know the cause of her death.

DeWind and Payne reported an 8% long-term mortality which included 10 deaths from liver failure.[6] I believe that deaths from liver failure can be reduced to near zero by close follow up and good cooperation by the patient and reversal of the Bypass before it is too late when it becomes apparent that they are not responding to medical treatment.

Results

When one looks at the long list of problems and complications and the appreciable number of deaths, one might ask why do this operation? Actually, these problem cases are only about 20% of the total number of Bypasses and the remaining 80% are the most appreciative grateful patients any surgeon will ever have. Most doctors who do not have any weight problems themselves do not appreciate how these morbidly obese patients hate being overweight and actually hate themselves and yet cannot seem to lose it any other way. This operation changes their whole life and frequently completely changes their personality and self-confidence and self-esteem. Besides greatly improving the quality of their lives, there are other benefits to their health. Most diabetics no longer require insulin. Cholesterol and lipids are lowered below normal. Hypertension is improved. Almost all the patients, even some of the ones who had severe complications, say they are glad they had it done and would do it again. The only dissatisfied patients were the ones who had an inadequate weight loss.

There have been three patients who lost less than 40 pounds. Two of them were among the early cases and barium studies revealed a marked reflux into the bypassed ileum. One of them was reoperated and the anastomosis converted to end to end followed by weight loss down to normal level. The other refused any more surgery and is still very obese. After that I started angulating the ileum and have had no more than minimal reflux as demonstrated by x-ray. However, there have been about 10 other cases who have lost more than 40 pounds but less than 80, not a very satisfactory result in a hugely obese patient. The exact cause for these failures no one seems to know but they have been reported in all series of cases both end to end and end to side.

Summary

200 cases of Jejuno-Illeal Bypasses that have been followed from one to six years are reported. Most of these were end to side, 12 inches of jejunum to 4 inches of ileum with angulation to prevent reflux. About 25% of these patients had to be readmitted to the hospital at least once for treatment of complications, and problems associated with the Bypass. There was no operative mortality but there have been six deaths (3% of the series), 18 patients had to have the Bypass either reversed or revised (lengthened) because of serious problems (9% of the series). Five per cent had inadequate weight loss and 80% of the results were classified as "Excellent," meaning that both the patient and the surgeon were happy. ●

References

1. Payne, JH, DeWind, LT: Surgical treatment of obesity. Am. J. Surg. 118:141-147, 1969.
2. Scott, HW, Sandstead, HH, et al: Experience with a new technique of intestinal bypass in the treatment of morbid obesity. Ann. Surg. 177:726, 1973.
3. Gaspar, MR, Movius, HJ, et al: Comparison of Payne & Scott Operations for morbid obesity. Ann. Surg. 184:507, 1976.
4. Dickstein, SS, Frame, B: Urinary tract calculi after intestinal shunt operations for the treatment of obesity. Surg. Gyn Post. 136:357, 1973.
5. Cegielski, MM, Organ, CH, Saporta, VA: Revision of intestinal bypass procedures. Surg. Gyn Obst. 142:838, 1976.
6. DeWind, LT, Payne, HJ: Intestinal bypass surgery for morbid obesity long term results. JAMA 236:2298, 1976.

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Is Psychiatry An Endangered Species?

James A. Greene, M.D.*

The fact that such a question is even asked suggests that Psychiatry is undergoing a very difficult and crucial time in its history. Several books and papers have recently been published suggesting Psychiatry's imminent demise, one such being Dr. Fuller Torrey's book *The Death of Psychiatry.*[1]

Dr. Ewald Busse suggests in the title of his paper, "The Future of Psychiatry—A Hobson's Choice" that the course of Psychiatry may have been set. He states, however, "I do not believe that the future of Psychiatry is as yet sufficiently clear to assure its vitality as an important subspecialty of medicine. It is particularly important that we do not wind up accepting just any old horse..."[2]

Dr. Lawrence Kolb at a recent symposium on the Future of Psychiatry questioned whether perhaps Pinel had overstated his position regarding the rights of the mentally ill. Right to treatment raises the moot question as to whether mentally ill persons, especially those with severe impairments, can succeed as productive members of society with all its complexities, especially as these complexities increase in frequency and character.[3]

I do not believe that it is appropriate at this time to write a eulogy on Psychiatry. I would like to suggest that we most assuredly can direct the course of our profession. However, intelligent and effective direction requires that we face some of the basic issues in Psychiatry as they appear today, decide upon some solutions, and act upon those decisions.

What are some of the basic issues facing us? For one, the growing importance of National Health Insurance to all Physicians and especially to Psychiatrists. It is important that we meet this issue head-on since the passage of important and far-reaching proposals seem imminent. We must also try to help define future legislation so that it will not put undue limits on psychiatric coverage as have some of the recent proposals.

For another, there has been the emergence of strong disunity and polarization within the profession. This polarization is seen along philosophic and political grounds. Politically, factions have emerged in the APA such as the "Committee for Concerned Psychiatry" and the "Committee for Progressive Responsible Psychiatry."

Philosophically, the medical versus the social model is widely debated. It has been stated that declaring "...that behavior is explicable on the one hand only in biological terms or on the other hand in exclusively social and environmental terms, is a sad and irrational return to medieval notions of the separation of soul and body."[4] This disparity of opinion needs to be examined as objectively as possible.

Army of Non-Professionals

Also to be considered is the impossible-to-ignore "army" of non-professionals and other professionals who are performing psychiatric functions. In our lifetime, racism, sexism, mysticism (including religion and witchcraft), feminism, etc., are all social forces to be reckoned with and have generated many of these para-psychiatrists. Also, the unrest and "dis-ease" resulting from the now possible universal annihilation and from challenges youth has hurled at the establishment have contributed to the popularity of these groups. Their services need to be examined objectively and their roles in treatment and prevention of mental illness more clearly defined.

In addition, there is a growing demand to justify our services. In this age of introspection and investigation, we must confidently face our inquisitors, asserting that "...The fact that psychiatry can be abused does not make psychiatry an abuse."[5] The consumer clearly has a voice and working with these responsible consumer groups will enhance our profession as well as society at large. The age of accountability is upon us.

Finally, we face something of a double bind in psychiatric treatment today. For example, scientifically-based treatment modalities such as chemotherapy and electro-convulsive treatment are under increasing government control and court scrutiny. This is illustrated by the recent California law essentially blocking the use of ECT. In contrast, other forms of therapy with less scientific underpinnings, including certain forms of psychotherapy, are so controversial, for the reason of nebulous qualifications and doubtful efficacy, that third-party payors are refusing payment of claims. It is time to launch our offensive with treatment-outcome studies.

Changes In The Wind

What other steps can we take then in dealing with these various issues which affect our profession today and will continue to affect it in the future? Many of our leaders in the profession have suggested direction quite eloquently. Somewhat in retrospect, trends have been noted by Dr. Halleck in regard to government control, societal change, and new technology. However, he affirms that "There is general agreement among psychiatric educators that good psychiatrists, eclectic or otherwise, must have a deep understanding of human experience and considerable intellectual openness..."[6]

All such statements seem to indicate that our public image is in need of repair. Sometimes it seems that we are our own worst enemies in presenting our image to the public at large and those in control, such as our legislators, etc. It appears to me that it is important to engender respect for ourselves. A good starting point is to respect one another's differences as regards treatment, orientation, methods. There should be a continual critical eye upon treatment modalities and their various aspects.

Individually, a psychiatrist should be able to define psychiatry, as well as his own role, to stand firmly and confidently upon his own philosophy of practice. Then,

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and then only, may we present a reasonably united front, particularly as it involves the increasing involvement and control of third parties. Psychiatrists should proceed decisively with peer review. Our standards should be assessed critically, both now and continually.

Only 35% Are Certified

Continuing education is a must and the requirements must be stringent enough to emphasize that mere attendance is not enough. Recertification is probable but the primary problem in our specialty is the lack of certification. At present, only 35% of practicing psychiatrists are now certified. This represents by far the lowest certification percentage of any of the major specialties and reflects on training programs, trainees as well as the certifying board.

We need to encourage more psychiatrists to seek and obtain certification. Perhaps we could begin such a study by determining why 40% of psychiatrists did not take the exam after being declared eligible, and why only 38% of those who did take Part I of the exam completed successfully both parts of the exam in 1973. (Last year for which statistics are available.)[7]

Also, we must broaden our relationship with fellow physicians and other specialists through consultation-liaison in the present time, with an awareness of the much earlier stage of young physician development at medical school/internship level, where often psychiatry has not been presented with as much promise as other specialties. Often, according to Light, medical school actually discourages interest in Psychiatry. He states:

"The point is that the very qualities that give psychiatry a low rating among medical students, who esteem competence and boldness, are in fact the marks of competence in psychiatry. Thus, medical students perceive psychiatry with some accuracy, but from the hostile perspective of technical medicine."[8]

Disinterest in academic medicine is a disservice to the profession. Involvement, not apathy, is the need of the hour.

Re-Examination Is Needed

Indeed, monasticism, by and large, will not usher in a brighter age. The future of psychiatry depends upon commitment of individual psychiatrists to re-examine their attitudes and actions relative to themselves, their patients, other physicians and mental health care delivery in our time. ●

Bibliography

1. Torrey, E., The Death of Psychiatry, Chilton Book Company, Radnor, Pennsylvania, 1974.
2. Busse, E., "The Future of Psychiatry: A Hobson's Choice," Adolph Meyer Lecture, 1971.
3. Kolb, L., "Personal Communication," Taylor Manor Symposium, 1975.
4. Freedman, A., Kaplan & Sadock, Comprehensive Textbook of Psychiatry, 2d, Vol 2, Williams & Wilkins, Baltimore, 1975, p. 2569.
5. Eisenberg, L., "The Future of Psychiatry," Lancet, December 15, 1973, p. 1371.
6. Halleck, S., "Future Trends in the Mental Health Professions," Psychiatric Opinion, 11:2, April, 1974, pp. 5-11.
7. Annual Report, American Board of Psychiatry and Neurology, American Journal of Psychiatry, 131:10, October, 1974, p. 1193.
8. Light, D., "The Impact of Medical School on Future Psychiatrists," American Journal of Psychiatry, 132:6, June, 1975, pp. 607-610.



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Rhinitis Medicamentosa (An Approach To Treatment)

by

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ABSTRACT

Rhinitis medicamentosa is a distressingly common condition which results from chronic use of topical nasal vasoconstrictors. Little information about the nature of this disorder is found in the world literature and even less concerning the treatment. Twenty-two patients with this disorder are reported in this paper. The pathophysiology of rhinitis medicamentosa is discussed, and a treatment protocol which has yielded excellent results is presented. Hopefully, revived interest in this disorder will be generated. This fact should lead to more prompt diagnosis and treatment which is more gratifying, both to the patient and to the physician as well.

Rhinitis medicamentosa refers to a chronic inflammatory condition of the nasal mucous membranes secondary to prolonged use of topical vasoconstrictor agents. These agents are the active ingredient of virtually all commercially available nasal sprays or drops.

The beneficial effect of these compounds in alleviating symptoms of nasal congestion, from whatever the cause, is widely publicized, especially by their manufacturers. The potentially harmful effects which invariably occur with prolonged use are not so well documented or advertised. One finds the lay public and, surprisingly, the medical profession somewhat ignorant of the discomforting effects produced by these topical agents following long-term administrations.

These products are usually self-prescribed by the public, but many times by the physician as well. They are easily obtainable, as few controls exist over their distribution except in rare instances.

The frequency with which the author has encountered this complication in his practice has prompted this presentation, in which, hopefully, three objectives will be achieved: 1. the enlightenment of those unfamiliar with this disorder; 2. a review of the basic pathophysiology involved; and 3. presentation of a successful approach to treatment.

Materials And Methods

Twenty-two consecutive patients with this disorder were evaluated and treated in the private office of the author. Included in this study were patients who had been using topical vasoconstrictor agents for a period of at least one month, and in whom it was apparent to the author that this fact was to a large degree responsible for their continued difficulty with nasal obstruction. The incidence of various associated illnesses and predisposing factors leading to their nasal spray abuse were tabulated.

There were 16 patients with nasal allergy, 2 of whom had nasal septal deviations. Two patients had septal deviations without associated allergy. Three patients had upper respiratory infections which precipitated their nasal congestion. One patient was taking Reserpine, which was felt to aggravate his nasal congestion.

Each patient was placed on the identical treatment regimen used by the author, and re-evaluated personally from three to six weeks and six months following initiation of treatment. The age varied from 14 to 60 years old. There were an equal number of females and males. All were Caucasian.

For the purpose of clarity, a cure was defined as complete cessation of the use of topical vasoconstrictors in any form, associated with relief of symptoms and return of the appearance of the nasal mucosa to normal.

History

Since the latter part of the 19th Century, numerous nasal vasoconstrictor agents have been available in many various forms as inhalants, oils, sprays, drops, etc. The first drug of this type was isolated in 1887 by recovering it from the herb Ma-Huang. Chinese physicians had apparently used this drug for many years.

Barger and Dale, with their experiments, led to the discovery of neosynephrin and synephrin in 1910. Benzedrine, once commonly used, was introduced in 1930; privine was discovered in 1931.[1] Many other vasoconstrictor compounds were subsequently synthesized, manufactured, and used therapeutically. The effects of these agents and others on mucosal surfaces were studied extensively in the period from 1930 to 1945 by Kully,[1] Fox,[2] Lierle and Moore,[3] Fitzhugh,[4] Walsh and Cannon,[5] Proetz,[6] and others.

In the ensuing 30 years, little study has been done to add to existing knowledge concerning these preparations, but their usage has increased steadily. The products more commonly used today, by their trade names, are Afrin, Neo-Synephrine, Otrivin, Dristan, Sinex, Contac and Vicks.

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Pathophysiology

As mentioned, the active ingredients in virtually all topical nasal decongestants are vasoconstrictors. These agents are included in a class of drugs known as sympathomimetic amines, of which there are two types: those with alpha receptor activity and those with beta receptor activity.[7] Sympathomimetic amines with alpha receptors cause vasoconstriction and blanching when applied to the mucosal surface of the nose.

Chiefly effected are the blood vessels within the submucosa. These subepithelial capillaries, arterioles, and the venous sinuses (lakes) all undergo vasoconstriction.[1] Nasal secretion of mucus is also diminished. Ciliary action is affected adversely to a degree, related essentially to the concentration of the agent used and the length of time it is in contact with the nasal mucosa.[6,7]

These effects explain the temporary symptomatic relief that is obtained by using these preparations in acute allergic rhinitis, coryza, vasomotor rhinitis and sinusitis. All of these topical agents have the disadvantage that their use may be followed by "after-congestion." This is a "rebound" phenomenon whereby vasodilatation and congestion of the tissues occur once the vasoconstrictor effect has dissipated. The severity of rebound after congestion is directly proportional to several factors: 1. concentration and potency of the agent used, and thereby the severity of vasoconstriction produced; 2. the length of time (chronicity) that the agent has been used; 3. possibly the frequency with which it is used.[1,7,8]

The secondary vasodilatation may be caused by several factors. First, all of the sympathomimetic amines possess both alpha (constrictor) and beta (dilator) receptor activity.[7] It is postulated that the beta effect, although not as pronounced, outlasts the alpha effect and thereby leads to secondary vasodilatation and tissue congestion.

A second possibility is that prolonged vasoconstriction may lead to fatigue of the constrictor mechanism, and thereby lead to vasodilation.

Thirdly, however, and more likely, the after-congestion seen following the disappearance of vasoconstriction is secondary to changes in vascular reactivity due to tissue hypoxia.[1,7] The exact cause, however, is not definitely documented.

Once the patient begins using topical decongestants and does so for several days or more, the stage is set for an almost certain chain of events. Nasal congestion is temporarily relieved with infrequent use of nasal spray for several days. However, even though the precipitating event or illness may regress, nasal congestion persists, or even worsens, and becomes more resistant to the effect of the topical agent utilized. Therefore, larger amounts and more frequent use are required for relief.

Once the typical patient seeks medical advice from his physician, he is applying nasal spray from 4-15 times a day for relief of symptoms. The chief complaint is nasal congestion and often there is no suspicion on the patient's part that the nasal spray may be the causative factor. Ultimately, after repeated and long-term use of these agents, irreversible changes in the subepithelial tissue may result and atrophic rhinitis may follow.[2]

Predisposing Associated Factors

What is the initiating factor that leads a person to begin using topical decongestants? The most common factor in patients in this series was allergic rhinitis (16 of the 22 patients). The diagnosis of allergic rhinitis was established by clinical history, physical examination (before and after the nasal spray was discontinued), and eosinophil count. Allergy tests and hyposensitization were subsequently required in two patients. The remainder were controlled satisfactorily with antihistamine therapy (see Table 1).

The common cold, coryza, or upper respiratory infection was a common factor precipitating chronic use of nasal sprays. These patients had no allergic history and physical examination and eosinophil count were not indicative of significant allergy on initial or follow-up examination. Usage of nasal sprays began for symptomatic relief of nasal congestion and drainage, but were required even after symptoms other than congestion had abated.

Some began using sprays for acute or chronic sinus infection for partial relief of symptoms. A history of mucopurulent drainage as well as X-ray evidence of chronic sinus disease established the diagnosis.

Associated structural deformities causing airway obstruction, such as a deviated nasal septum, were also seen as predisposing factors. Table 1 summarizes these findings.

On initial physical examination many patients maintained a distressed appearance. If associated diseases were present, such as allergic rhinitis, findings consistent with that disease were also manifest. Typically, however, the nasal mucosa possessed a characteristic appearance. This seemed to vary in severity with the chronicity of nasal spray abuse. The mucous membrane was hyperemic, congested, and many times granular appearing.

Areas of increased tissue friability and punctate bleeding sites were seen, especially on the anterior septum and caudal tip of the inferior turbinate. Nasal mucus was clear and many times scanty, unless an associated sinus infection was present. In one patient who had used nasal spray daily for over 12 years, the mucous membrane was pale and anemic looking.

On occasion the underlying disease was more manifest by physical examination than the secondary effect of the nasal spray; for example, the wet, pale appearance of allergic rhinitis. In all patients, upon examination three weeks after beginning therapy, the mucosa had returned to its normal appearance.

Treatment

Both the acute and long-term treatment required for patients with rhinitis medicamentosa has been neglected in the world literature. In fact, no significant contribution to this effect is found in the literature from 1945 until 1972, at which time Chigwell[8] only briefly comments on the disorder itself. It would seem logical that treatment should be directed toward achieving two main objectives: 1. comfortable cessation of the use of vasoconstricting agents for a suitable period of time to allow the injured mucosa to return to normal; and 2. treatment of the underlying disease which led to the abuse initially.

To begin with, when the patient is seen, a detailed history is taken, taking care to ask specifically about the

TABLE 1

Summary Of Associated Factors

Allergy	16
Deviated septum	4
U.R.I.	3
Sinusitis (X-ray)	3
None	1

use of nasal sprays by the patient. Careful probing for underlying disease such as allergy, chronic sinus disease, nasal trauma and metabolic disorders (e.g., hypothyroidism) must be done. A careful E.N.T. examination follows — mechanical cases of prolonged obstruction may be found, e.g., nasal septal deformities, chronic sinusitis, allergic polyps, etc. Sinus X-rays are routinely performed. An absolute eosinophil count is done on all patients because of its correlation with nasal allergy.

Following the above procedures, the diagnosis is usually established. At this point a detailed explanation of rhinitis medicamentosa is discussed with the patient, insuring that he is fully aware of the mechanism by which he has produced this disorder. This may be the single most beneficial item in the entire treatment regimen. The following program is then outlined: 1. programmed cessation of nasal spray; 2. systemic decongestant-antihistamine combination, and 3. topical corticosteroid therapy.

Cessation of Nasal Spray. Most patients who abruptly discontinue nasal sprays after chronic abuse are beset with profound nasal congestion. Because of the severity of symptoms they rapidly re-initiate their usage of nasal sprays. Because of this fact, patients are asked to discontinue usage in one nostril only, usually their "best" side.

They are instructed to use their spray as much as they like in the other nostril, but to discontinue it as soon as they feel they can. It is explained that usually within several weeks the nasal tissues on their best side, in which they had stopped their spray, would return to normal, and that nostril would "open up." At this point, they may discontinue spraying the opposite side. By allowing the patient to have one "open" nostril during the withdrawal period, one will greatly enhance the results of treatment. All patients are able to stop using sprays within two weeks, many much sooner.

Systemic Decongestant-Antihistamine Combinations. Many of these patients are allergic individuals and use of antihistamine combinations affords relief of that aspect of their symptoms. In addition, the beneficial shrinkage of mucous membrane afforded by systemic decongestants results in an easier and shorter withdrawal period with less "after-congestion." By using these agents then, one is able to 1. control underlying allergy, 2. reduce withdrawal symptoms, namely "after-congestion," and 3. ultimately, in many cases, allow the patient to stop usage of his nasal spray within several days.

Topical Corticosteroids. For this purpose the author has used exclusively the Decadron turbinaire apparatus. This is an aerosol for intranasal application containing Decadron as its active ingredient. The aerosol is pressurized in a cartridge which fits into a plastic dispenser, enabling one to deliver metered sprays into the nostrils. One spray delivers approximately 0.084 mgm of Dexamethasone.

Its use has three beneficial effects: 1. it aids in controlling underlying allergy; 2. it aids in reducing the irritating "after-congestion" of the injured nasal membranes by its anti-inflammatory properties; 3. it provides a psychological aid in allowing the patient to use a "non-harmful" spray during his withdrawal period.

TABLE 2

Decadon Dosage Schedule	Dexamethasone mgm	Cortisone equiv. mgm
1st week—		
Two puffs each nostril, QID	1.36	45
2nd week—		
Two puffs each nostril, TID	1.00	33
3rd week—		
Two puffs each nostril, BID	.67	22
4th week—		
Two puffs each nostril, QD	.34	11

The turbinaire is used with diminishing frequency for a period of four weeks, beginning with a dosage of two metered applications in each nostril four times a day. Each week the patient reduces the dosage by one application per day, so that by the end of the fourth week, it is discontinued altogether (Table 2).

The absorption of drugs applied intranasally is variable, and the possibility of side effects from nasal use of Decadron may exist. Even, however, if the entire amount of Decadron used was absorbed, this dosage does not lead to pituitary supression of ATCH secretion when used over such a short period of time. Reports of septal perforation from use of Decadron turbinaire are found in the literature. This complication was not encountered in this study.

The author prefers the use of a topical agent as opposed to systemic steroids for several reasons: 1. limited absorption with less chance of side effects; 2. ability to apply the agent directly to the site of irritation which seemingly has a beneficial effect; and 3. psychological benefit to the patient of using a spray during the withdrawal period.

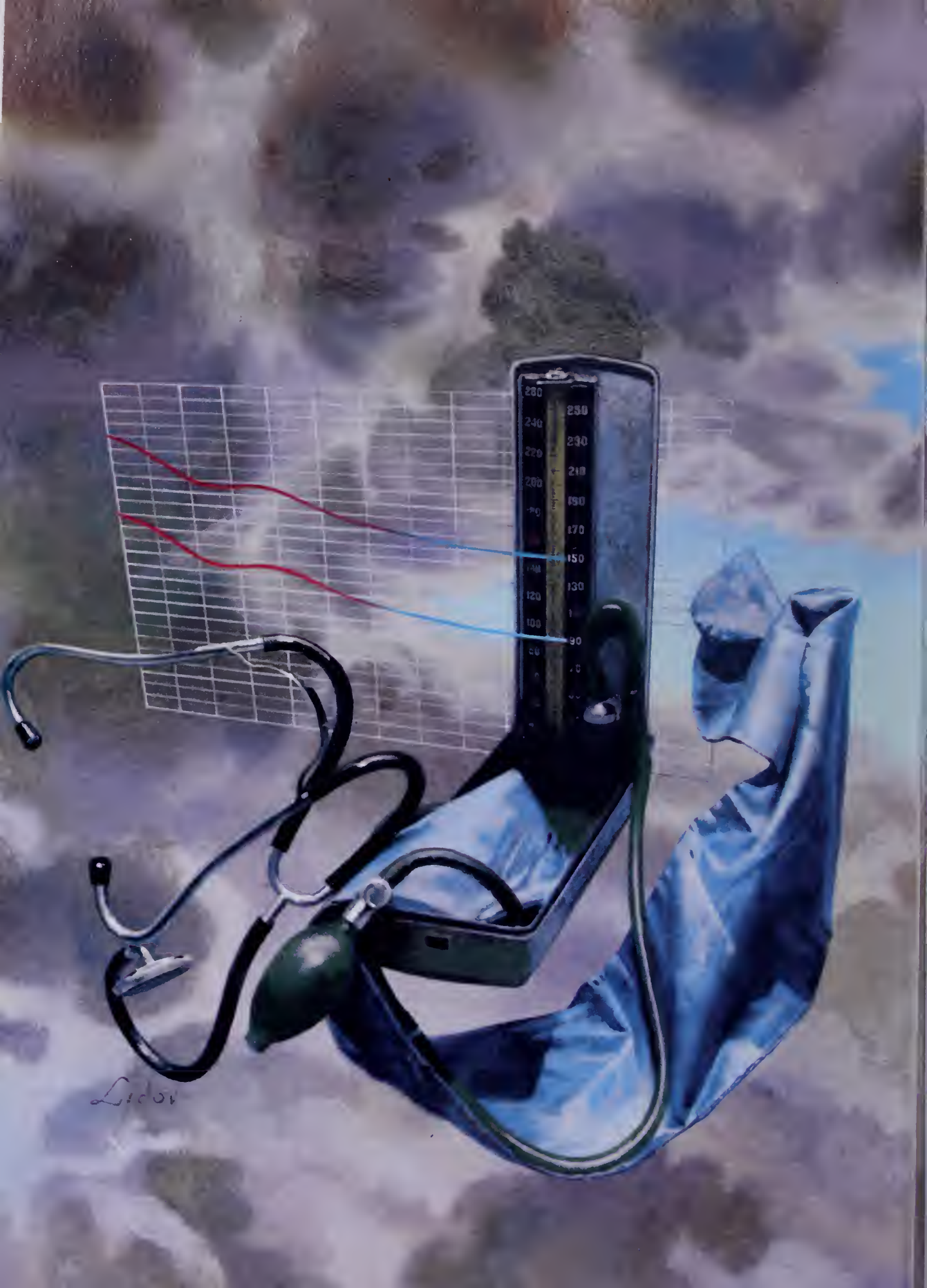
Results

No failure was encountered in this study, as all 22 patients were able to discontinue the use of topical vasoconstrictors totally within two weeks using the treatment regimen that has been described. No patient in this group had returned to usage of nasal sprays at the six month follow-up evaluation.

Subsequent treatment was needed, of course, in those whom persistent underlying disease was found, e.g., allergy, septal deviation, etc. ●

BIBLIOGRAPHY

1. Kully, Barney M. The Use and Abuse of Nasal Vasoconstrictor Medications. J.A.M.A. 127:307-310, 1945.
2. Fox, Noah. The Chronic Effect of Epinephrine and Ephedrine on the Nasal Mucosa. Arch. Otol. 13:73-76, 1931.
3. Lierle, D.M. and Moore, P.A. Effects of Drugs on Ciliary Activity of Mucosa of Upper Respiratory Tract. Arch. Otol. 19:55-65, 1934.
4. Fitzhugh, William M., Jr. Neosynephrine Hydrochloride in Otolaryngology. Arch. Otol. 24:425-434, 1936.
5. Walsh, Theodore, E. and Cannon, Paul R. The Problem of Intranasal Medication. Ann. Otol. Rhinol. Laryngol. 47:579-607, 1938.
6. Proetz, A. Applied Physiology of the Nose, St. Louis, 1941.
7. Goodman, Louis S. and Gilmon, A. The Pharmacological Basis of Therapeutics. MacMillan Co., N.Y., pp. 488-520, 1965.
8. Chigwell, R. Iatragenic Disorders of the Nose and Throat. Proc. Roy. Soc. Med. 65:679-681, 1972.


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References:

1 Dornfeld L, Kane R: Metolazone in essential hypertension. The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18:** 527-533, 1975

2 Data on file, Medical Department, Pennwalt Prescription Products

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CME BY SELF-ASSESSMENT

By George D. Oetting, Ed.D.

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The testing time is generally two to four hours, although in some cases it might be longer. Study aids include reprints of articles, study references, discussion of answers to questions and feedback on your own responses to the questions.

Fees for enrollment for most of these programs range generally from $20 to $50, although some are more expensive. Usually, members within the organization sponsoring the test are given a reduction in the fee.

These self-assessment programs give you an excellent opportunity to pursue CME work at your own pace, in your own home, whenever you have an hour or two—without the necessity of long expensive trips to meeting locations. For further information on these programs, please contact the MASA Education Department or write directly to the address indicated below.

Tests are listed by specialty, title and sponsor.

Allergy & Immunology—Self-Assessment Program, American Academy of Allergy and American College of Allergists. Designed for: Allergists, clinical immunologists, other physicians & residents. Write: Allergy & Immunology Self-Assessment Program 1977, 3930 Chestnut Street, Philadelphia, PA 19104.

Anesthesiology—Self-Evaluation Program, American Society of Anesthesiologists. Designed for: Clinical anesthesiologists. Write: Self-Evaluation Examination Program No. III, American Society of Anesthesiologists, 515 Busse Highway, Park Ridge, Ill. 60068.

Cardiology—Self-Assessment & Education Program, American College of Cardiology & American Heart Association. Designed for: Cardiologists, physicians, Write: Self-Assessment In Cardiology, 9650 Rockville Pike, Bethesda, MD 20014.

Chest Disease—Physician Self-Assessment Program, American College of Chest Physicians. Designed for: Chest physicians. Write: Warren Godfrey, Director, Multimedia Communications, 911 Busse Hwy., Park Ridge, Ill. 60068.

Clinical Pathology—Professional Self-Assessment Program for Medical Lab Personnel, American Society of Clinical Pathology, Commission on Continuing Education. Designed for: Pathologists, medical technicians, physicians. Write: Manager, Professional Self-Assessment Program, American Society of Clinical Pathology, 2100 W. Harrison St., Chicago, Ill. 60612.

Colorectal & Anorectal Surgery—Self-Assessment Examination, American Society of Colon & Rectal Surgeons. Designed for: Members, physicians at annual meetings. Write: Ms. Harriette Gibson, Admin. Secretary, American Society of Colon and Rectal Surgeons, 320 W. Lafayette, Detroit, Michigan 48226.

Dermatology—Self-Assessment Program, American Academy of Dermatology. Designed for: Practicing dermatologists. Write: Dermatology Self-Assessment, American Academy of Dermatology, 820 Davis St., Evanston, Ill. 60201.

Emergency Medicine—Physician's Evaluation & Educational Review, American College of Emergency Physicians & Emergency Medicine Foundation, Designed for: Emergency Physicians, residents, interns and students. Write: American College of Emergency Physicians, 3900 Capital City Blvd., Lansing, Michigan 48906.

Family Medicine—Core Content Review of the Connecticut & Ohio Academies of Family Physicians. Designed for: Family physicians, residents, internists and pediatricians. Write: Arthur N. Schuman, Director, Core Content Review Project, Conn. & Ohio Academies of Family Practice, 179 Allyn St., Suite 304, Hartford, Conn. 06103.

Family Medicine—Family Practice Pretest, Dept. of Continuing Medical Education, Univ. of Wisconsin-Ex-

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tension. Designed for: Family practice residents, family physicians. Write: S. E. Sivertson, M.D., Family Practice Pretest Associate Chairman, Dept. of Continuing Medical Education, 465 WARF Bldg., 610 Walnut St., Madison, Wisconsin 53706.

Family Medicine—Individual Physician Profile, Dept. of Continuing Medical Education, Univ. of Wisconsin-Extension. Designed for: Family practitioners, family practice residents and internists. Write: Sig Sivertson, M.D., Individual Physician Profile Program, Dept. of CME, Univ. of Wisconsin-Extension, 465 WARF Bldg., 610 Walnut St., Madison, Wisconsin 53706.

Gastroenterology—Self-Assessment Program, American Gastroenterological Association. Designed for: Gastroenterologists, other physicians. Write: Norton Greenberger, M.D., Dept. of Medicine, Kansas University Medical Center, Kansas City, Kansas 66103.

Internal Medicine—Medical Knowledge Self-Assessment Program I, II, III, IV, American College of Physicians. Designed for: Internists (General & Specialized). Write: Edward C. Rosenow, Jr., M.A.C.P., Executive Vice-President, American College of Physicians, 4200 Pine St., Philadelphia, PA 19104.

Neurological Surgery—Self-Assessment Examination, American Association of Neurological Surgeons. Designed for: AANS Members, all neurosurgeons. Write: Dr. Stephen M. Mahaley, Jr., Chairman, Continuing Education I, Dept. of Neurosurgery, Duke University, School of Medicine, Durham, North Carolina 27710.

Neurology—Continuing Self-Assessment Examination in Neurology, American Neurological Association & American Academy of Neurology. Designed for: Residents, neurologists, physicians. Write: Stanley A. Nelson, Executive Secretary, American Academy of Neurology, 4005 W. 65th St., Minneapolis, MN 55435.

Ophthalmology—Ophthalmic Knowledge Assessment Program (OKAP), American Academy of Ophthalmology & Otolaryngology. Designed for: Residents and practitioners. Write: Ophthalmic Knowledge Assessment Program, c/o American College Testing Program, P. O. Box 168, Iowa City, Iowa 52240.

Ophthalmology—Ophthalmology Basic & Clinical Science Course, American Academy of Ophthalmology & Otolaryngology. Designed for: Practitioners and residents-in-training. Write: Continuing Education Dept., American Academy of Ophthalmology & Otolaryngology, 15 Second St., SW, Rochester, MN. 55901.

Orthopaedics—Orthopaedic Self-Assessment Examination (OSAE), American Academy of Orthopaedic Surgeons. Designed for: Orthopaedic surgeons. Write: Committee on Exams & Evaluation, American Academy of Orthopaedic Surgeons, 430 N. Michigan Avenue, Chicago, Ill. 60611.

Otolaryngology—Annual Otolaryngology Examination, American Academy of Ophthalmology & Otolaryngology. Designed for: Residents in otolaryngology, otolaryngologists, physicians. Write: Dept. of Continuing Education, American Academy of Ophthalmology & Otolaryngology, 15 Second St., SW, Rochester, MN 55901.

Otolaryngology—Otorhinolaryngology Self-Improvement Program (ORL-SIP), American Academy of Ophthalmology & Otolaryngology. Designed for: Otolaryngologists & physicians. Write: Dept. of Continuing Education, American Academy of Ophthalmology & Otolaryngology, 15 Second St., SW, Rochester, MN. 55901.

Pediatrics—Personal Assessment for Continuing Education (PACE), American Academy of Pediatrics. Designed for: Board certified pediatricians in practice 10-15 years, house officers, family physicians. Write: Gerald E. Hughes, MD, Director, Dept. of Educational Affairs, American Academy of Pediatrics, 1801 Hinman Ave., Evanston, Ill. 60201.

Physical Medicine & Rehabilitation—Self-Assessment Program, American Academy of Physical Medicine & Rehabilitation. Designed for: Practitioners and residents in PM&R, physicians. Write: American Academy of Physical Medicine & Rehabilitation, Self-Assessment Program, 30 N. Michigan Ave., Chicago, Ill. 60602.

Plastic and Reconstructive Surgery—Plastic Surgery Educational Assessment, American Society of Plastic & Reconstructive Surgeons. Designed for: Plastic surgeons in practice and residents-in-training. Write: Donald R. Laub, MD, American Society of Plastic & Reconstructive Surgery, Division of Plastic Surgery, Room 213, Stanford University Medical Center, Stanford, California, 94305.

Psychiatry—Psychiatric Knowledge & Skills Self-Assessment Program (PKSAP III), American Psychiatric Association. Designed for: APA members, other psychiatrists, non-psychiatric physicians, psychiatric residents, mental health professionals. Write: PKSAP III, Office of Education, APA, 1700 - 18th St., NW, Washington, DC 20009.

Radiology—Self-Evaluation & Continuing Education Program, American College of Radiology. Designed for: Practitioners located away from medical centers but used by most radiologists, including residents. Write: American College of Radiology, 6900 Wisconsin Ave., Chevy Chase, Maryland 20015.

Surgery—Surgical Education & Self-Assessment II (SESAP II), American College of Surgeons. Designed for: Surgical specialists, general surgeons with 10 years practice after residency training. Write: Surgical Education & Self-Assessment Program, American College of Surgeons, 55 E. Erie St., Chicago, Ill. 60611.

Urology—Self-Assessment Examination, American Urological Association. Designed for: Clinical Urologists. Write: American Urological Association, Inc., Office of Education, P. O. Box 1129, Aspen, Colorado 81611.

Multidisciplinary—Self-Assessment Program, National Medical Association, Inc. Designed for: Practicing physicians. Write: William E. Matory, M.D., Coordinator, Continuing Education for the National Medical Association, Inc., 2041 Georgia Ave., N.W., Washington, DC 20060.

Multidisciplinary—Self-Assessment Examination, Philadelphia County Medical Society. Designed for: Physicians in any specialty. Write: Mr. Richard M. Nelson, Executor Director, The Philadelphia County Medical Society, 2100 Spring Garden St., Philadelphia, PA 19130. ●



RACETRACK MEDICINE

CONTINUED FROM PAGE 12

over that car into her windshield. She had tried to stay in the race despite glass shards in one eye but dropped out when her engine also blew. In the few minutes she had while the engine was being replaced, she walked over to the hospital to have the glass removed. Dr. Bliss got her back into action quickly. (The hospital is located next to the garage and pit area.)

2:03. A woman, covered with blood, is rushed into the operating room by ambulance attendants. Doctors and nurses jump into action. She has an obviously severe injury on the right side of her head. All doctors try to find a heart beat. None succeeds.

2:08. Dr. Hardwick removes his stethoscope and says the woman, later determined to be the 69-year-old mother of driver David Sisco of Nashville, is beyond help, DOA. Although the testimony of witnesses was garbled and contradictory, she seemed to have been walking around the infield listening to the radio over a headset-type instrument when she ran into the side of a moving pick-up truck. (Or it ran into her. Just which, was never clear.) She was thrown beneath the rear wheels where death may have been instantaneous.

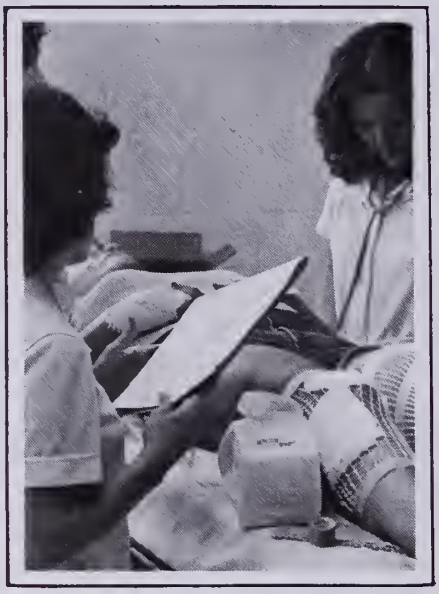
2:09. Thomas G. Johnson, D.D.S., a dentist from Morgantown, N.C., serving as a member of one of the driver's pit crew, comes into the hospital covered with grease and sweat. "We're finished. Synchronizer out. Probably mishandled by pit crew at the last stop." He grabs a soft drink from the hospital refrigerator and downs it thirstily.

2:15. Dr. Hardwick makes a phone call and reports: "Truck hit a woman and broke her neck. She was DOA." He is obviously saddened, as are the other physicians and nurses.

2:16. Sheriff's deputies from Talladega come to the hospital and ask the time of death and how it was certified.

A Stunned Boy

2:17. Suntanned boy, about 17, comes in to see Dr. Hardwick. Nervous, eyes brimming with tears, he says he was asleep on the back seat of the truck when the fatal accident occurred. All he knows about it was that the driver had awakened him to say he thought he'd run over a motorcycle. Dr. Hardwick is very gentle with the frightened youth.



2:29. Dr. Hardwick makes out his death report for the Speedway.

2:33. The Coroner arrives to see Dr. Hardwick. While all this is going on, the hospital is suddenly filling up with patients.

2:38. Dr. Bliss tries to comfort a beautiful young girl, 18 perhaps, who had fallen out of the back of a truck, suffering deep abrasions on the knees, elbows and face. She is hysterical. Dr. Bliss cannot quiet her and is later joshed for his failure by his colleagues. The injured girl, dressed in what appears to be the wardrobe of the racetrack counter-culture, is bandaged and moved to a bed, but cannot rest despite the ministrations of friends who have now come to the hospital to offer solace.

2:40. Suddenly, the sounds of weeping fill the hospital as more patients crowd in. Dr. Roberts: "Sometimes we have more emotional problems than medical ones. The dead cannot be disturbed, but. . ." His voice trails off. A friend of the dead woman is in shock.

3:03. After the biggest rush of the day, Dr. Hardwick steps outside to check the progress of the race. He returns and reports to all within his hearing: "They've got some race going out there. Four are still in the same lap."

3:16. Dr. Hardwick: "It's been a light day so far. Not so much heat exhaustion as we expected."

3:24. Dr. Roberts: "Well, 40 more laps (total: 188) and we'll have it made. Then we will get accidents as they leave, shoot each other and cut each other up."

3:29. Dr. Roberts, after hanging up the telephone: "They're lining up at all the aid stations. Heat!"

An Overheated Teen-ager

3:33. Dr. Bliss, pointing to a crumpled shape on one treatment table: "This little gal's just too hot." A nurse takes the teen-ager's temperature and begins administering glucose and piling on ice packs.

3:35. Don Naman, Speedway General Manager, comes in: "This is the hottest race we have had in eight years." (Looking around approvingly.) "You can't get better hospital treatment anywhere than right here."

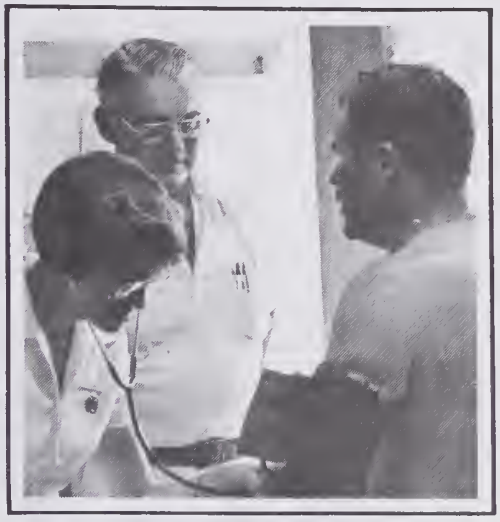
3:38. A measure of calm has returned to the little hospital. The comely blonde who fell off the truck is finally asleep. Dr. Bliss looks out the OR window at the standings board, accompanied by several nurses. Lap No. 165 — only 23 laps to go.

3:44. Driver Dick May, who blew an engine and hit the wall at high speed, comes in holding his stomach. Dr. Hardwick: "Are you all right, Dick?" May says, "It's nothing, Doc, just here," pointing to his abdomen. "Your liver is under there, Dick," Dr. Hardwick says. After examining the driver, Dr. Hardwick agrees to let him leave but only on the condition he consult another doctor should the pain recur.

3:56. Lap 179, nine laps to go. The crowd is standing and cheering. Dr. Hardwick and four nurses go outside







Left: Dr. Hardwick and nurses remove the impacted dirt from the eye of driver Buddy Baker, who is exhausted after a long, hot race. Top Right: The 40 x 40 infield hospital in which Dr. Hardwick has his unique practice at least twice a year. Bottom Right: Driver Dick May was brought into the hospital after blowing an engine and hitting the wall at high speed. Dr. Hardwick is concerned about liver damage.

to the back fence that separates the hospital yard from the track. He watches for four laps, then sees a smoking car go by. A few minutes later, lap 184, it comes around again as the driver, Skip Manning, tries to finish. By now the smoke is billowing in great, dense clouds and Dr. Hardwick is visibly concerned: "I knew it, I saw him smoking on that last lap." Manning, though running much slower, stays in the race with a burning engine, to Dr. Hardwick's acute displeasure.

The End Of The Affair

4:06. The race is over. Donnie Allison won it. Dr. Hardwick is eating orange sherbert.

In all, 40 cars had entered the race, but only 16 finished. Heat, misfortune and mechanical problems had taken their toll, but there were no serious accidents. The physicians could now relax, but not for long. Soon the crowd would be leaving, the usual fights would commence and more patients would pour in—if past experience was any guide. Dr. Bliss sits on the operating table, temporarily relieved.

4:13. Driver Buddy Baker comes in with dirt impacted in his eye, despite goggles. His hands are blistered from the long, hot battle with the steering wheel. He is treated, given a soft drink and released.

4:17. Dr. Hardwick: "Well, if the knife and gun club doesn't meet and send us patient, we'll have it made." He lights a Camel, inhales deeply. "It's been very light, lightest we ever had, except for the fatality."

Althought most had come at once, 60 patients was the best estimate of the total for the day, without a single suture having been made—in itself, very unusual. Another person did die on the highway outside, but was not taken to the infield hospital.

4:30. An elderly man from Birmingham is half-carried in, his face contorted in pain. Sprained ankle is the diagnosis. A woman with heat exhaustion staggers in and is administered glucose and packed in ice.

5:11. All quiet, although remnants of the crowd remain.

A Brief Happy Hour

A nurse fetches a bottle of Vodka from somewhere, some cold orange juice and Styrofoam cups. Two of the doctors have a mild screwdriver. Dr. Hardwick declines; he has at least another hour before his long day is over.

5:16. Dr. Bliss and Roberts make their departure, with promises to be present for the next meeting, in May 1978. Dr. Hardwick is left behind. Dr. Hawes, who had started to leave too, reconsiders and decides to remain with the racetrack veteran, in case he's needed.

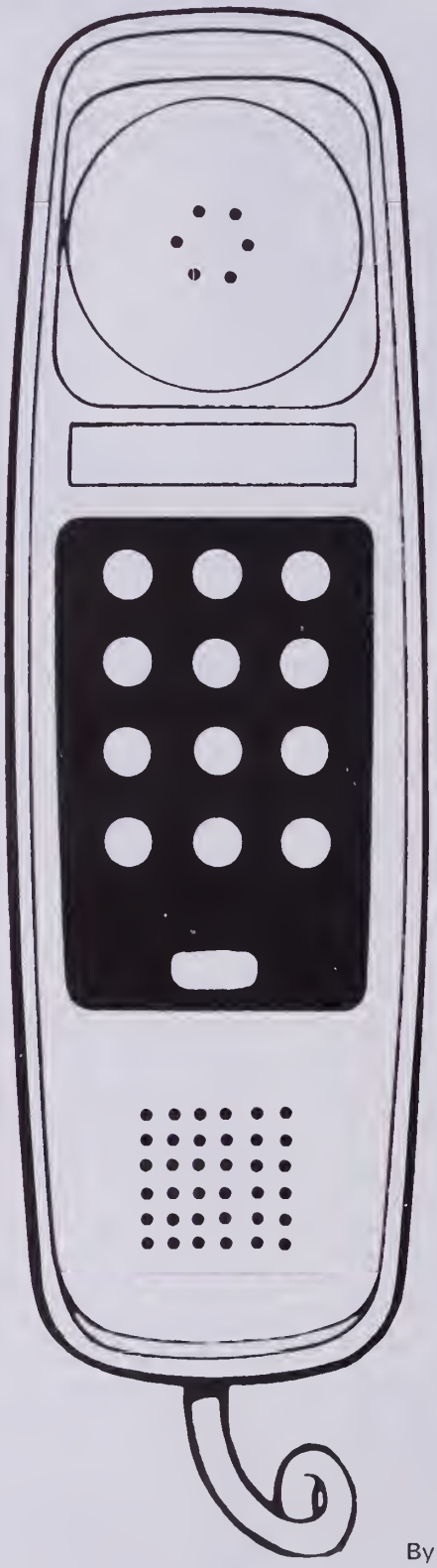
5:30. The stands are almost empty now, an hour and 24 minutes after the race ended. A few stragglers remain, some drinking beer.

Dr. Hardwick jokes with the nurses, who have been at the hospital since early morning. All are tired, but it wasn't nearly as bad as they had expected.

Very soon now, they will close the hospital until Talladega USA (pop. - 17,662) is the focus of world racing attention once again. ●

The Busy Signal

Survey, Starset And A



At almost every workshop we have conducted on the use of the telephone in medical practice, the question has been asked, "How many telephone lines should I have?"

It is a good question and can be answered quite specifically, regardless of the specialty of the physician or whether the doctor is in a solo group practice. The answer, however, requires an explanation of the "busy signal survey." The "busy signal" is a measure of the number of times that calls to your office get a busy signal and do not get through. The survey is made by the telephone company, in most areas at no charge, by attaching a device to your incoming lines which automatically counts the number of calls that met with a busy signal. At the end of a week, two weeks or a time period that appropriately represents your practice, the telephone company will give you a report detailing the results.

If more than 20% of your callers are getting a busy signal you probably need a combination of more incoming and/or outgoing lines. And remember, adding more incoming lines may also mean having more personnel to answer the phone or a reorganizing of present staff duties to assist the main receptionist.

One reason for busy lines is that staff members may be using incoming lines to make necessary business calls—to schedule surgery, admit patients, call about overdue accounts, or return patient calls. In this case you may solve the problem by simply adding a line for *outgoing calls only.*

Also, when you expand your practice by adding physicians or allied health personnel you'll need more lines, not just extensions, to accommodate the additional call load.

If you hear comments from your patients such as, *"I've been trying all morning to reach Dr. Jones, but your lines are always busy"* or *"What's wrong over there, your number is busy every time I dial,"* you should plan to schedule a busy signal survey soon. If your practice is growing or changing, repeat the survey on an annual basis.

Along with the busy signal survey you may want to consider *a peak load survey.* This, too, is made by the telephone company with a device that automatically counts the incoming and outgoing calls, and records the days, and the time of day, when your calls are heaviest. Using this data you can reschedule certain jobs that can be performed at non-peak load times. For example, on Monday mornings when the phone literally rings off the hook, perhaps an additional staff member could be assigned to help with telephone answering. Some offices have hired part-time personnel to assist the receptionist during these especially hectic times.

By Diane Palmer, Program Director, Division of Medical Practice, AMA

Problem-Solving Suggestion

In most areas you contact the telephone company marketing department to arrange for the surveys.

You can further help the telephone assistant responsible for most of the telephone work by investigating the use of a STARSET. This is an extremely light weight headset originally developed for the astronauts. Weighing only a few ounces, it does not have to be held by a band over the top of the head—which many medical assistants find objectionable. A tiny receiver hooks on the ear and the operator talks into a very slender, plastic tube, about half the diameter of a pencil, that curves down from the ear piece to within a couple inches of the mouth.

Using the STARSET (this is a trade name and similar equipment may also be referred to as simply a feather weight headset) the telephone assistant has both hands free during the telephone conversation. It can also be secured with a coiled extension cord that hangs back of the operator so that she can move about, perhaps get up and go over to the file, while still carrying on a conversation with the patient. This is considerably more advantagious for both the caller and the telephone assistant than having to to put the caller on "hold," lay the receiver on the desk, go to the file for the information required, then return to her desk, pick up the receiver and connect with the caller again.

In investigating a STARSET for your office be sure to have your telephone assistant in on the investigation—or assign this job to her exclusively. If she makes, or shares in, the decision to get this equipment she will be happier with it than if you simply have one delivered to her telephone station.

The STARSET plugs into a standard desk phone that is equipped with a special jack. The phone can be used in the regular manner when the telephone load is light. The head-set does not have to be used all of the time, but is available immediately when needed.

Your telephone company can give you a demonstration. There is a monthly charge for the unit, which varies in different localities, and a one-time installation charge for the plug-in jack.

When reviewing your telephone equipment consider the possibility of providing a phone in the reception room for your patients. Patients at times need to make a quick call — *most often because they have had to wait longer than anticipated.* Providing a phone for patient's use is a service to them and a help to you. A wall-mounted phone, *no chair near by,* in view of the front office staff will do the trick. The telephone company can install a single line telephone with local prefixes only, so that long distance calls cannot be made. No number is shown on the phone, thus preventing patients from calling in and your medical assistant having to answer it. A small card at the phone listing the telephone numbers for taxi and bus service is a real help to patients who must depend on public transportation. It also saves the receptionist's time in looking up this information for patients.

The alternative of letting patients use the receptionist's telephone for outgoing calls has a number of serious disadvantages. Here are just a few.

First, it can tie up a line and result in a busy signal for someone calling in.

Second, your work area has many records that are *confidential,* such as medical charts, financial card, hospital and laboratory reports, etc. These should not be seen by any but *authorized* personnel. People are curious by nature and the opportunity to look is too much for some to pass by.

Third, prescription pads are often on desk tops and in various work areas. These might be picked up by some patients while using the telephone in a work area. This is a very real and current problem. One way of obtaining drugs is by forgery, and stolen prescription pads play a part in this scheme.

Fourth, cash received from patients for office services is usually kept in a drawer easily accessible to anyone using the phone behind the desk. It could be a temptation for some patients and should be avoided.

And finally, your medical assistant's time is valuable. When patients use her phone she may have to run to another phone to answer an incoming call or to make a necessary outgoing call. This can happen when she hands the phone over the counter. And the situation is even more damaging if the caller has to usurp her work space.

The additional alternative of simply sending the patient out of the office to make a phone call also has some serious shortcomings. The patient who has to make a call because he or she has been kept waiting too long is not in the best of moods. Then if he or she has to go to a nearby pay phone, perhaps in the corner drugstore, make the call and then return to the reception office to continue to wait — the irritation is greatly compounded.

Whether or not you need a telephone for patients to call out depends, of course, on your particular situation, but if this is a problem a wall mounted phone in the reception room is a simple and inexpensive solution. ●

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Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

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Auxiliary



ONE MILLION AND A HALF FOR AMA-ERF

MRS. JOHN S. TAYLOR PRESIDENT

A $1,512,612.18 check was presented by Mrs. Norman Gardner, AMA Auxiliary President, to the American Medical Association Education and Research Foundation at the AMA Convention's opening session of the House of Delegates in June.

In the event you are not familiar with this foundation, AMA-ERF is a non-profit organization established in response to the urgent needs of qualified men and women who are finding the cost of financing a medical education difficult. Today's medical students can expect tuition bills alone of $2000/year (state-supported schools) to $12,500/year (Georgetown Medical College).

One of the main projects of the Auxiliary is to raise money for AMA-ERF. This money is for loans to medical students, interns and residents, for unrestricted grants to medical schools, for research grants and for scholarships.

Contributors to AMA-ERF may designate the way in which their contributions shall be used—for loans or research, and to which medical colleges they will be given. For every dollar raised for AMA-ERF loans, nine banks will loan $12.50 to qualified applicants. The foundation guarantees the loan. Over $77 million has been loaned to date.

AMASA raised over $36,000 this past year for medical education in Alabama. Dean Pittman, Medical College of Alabama, received over $43,000, and Dean Kreisberg, University of South Alabama, received $8,000. Donations from Jefferson-Birmingham Auxiliary were $16,205.70, about $8,000 of which was from the sale of hand-painted optics (Optics d'art), and received national recognition for donations based on membership size of 320-500.

Your auxiliary raises these vital funds each year with a variety of fund-raising affairs. One of the most popular is the Christmas Sharing Card. In lieu of sending individual greetings to each county physician, physicians and spouses donate (tax deductible) to their county auxiliary's AMA-ERF fund.

A creatively designed card, probably by a local auxiliary, is sent to every county physician's family, listing the contributors to AMA-ERF. We feel that this is such a hospitible and helpful way to remember your fellow physicians at Christmas.

As a spouse of a former AMA-ERF loan recipient, I can tell you that this program shows that we are concerned for our future physicians. AMA-ERF loans, research, unrestricted medical college funds do ultimately aid you to continue to render quality medical care and to extend medical resources availability in underserviced areas. ●

Helene

ama consultant

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By Gerald Farley, Asst. Director
Department of Practice Management
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American Medical Association

HOW TO START TO STOP

There is a vicarious thrill in reading the occasional news story about "Old Doc" who started practice in a one-room walk-up 60 years ago and today at 92, is still going to the office every day to serve the health needs of the community. However, fewer doctors today are practicing until they "die in the harness." There are a number of reasons for this in addition to the major fact the physician, as is true of any other individual, is entitled to retire and enjoy the fruits of long years of arduous service to society.

Today (and this wasn't always the case) the physician is covered under the Federal Social Security program and, in addition, is allowed to establish a tax deferred Keogh, Corporate, or IRA Retirement Plan. He no longer has to depend on after tax savings to finance living expenses and the things he would like to do after he ceases to practice.

A recent and more dramatic reason for an increasing number of physicians retiring from active practice is the professional liability insurance situation. Malpractice insurance costs have doubled and tripled with no relief from the nearly confiscatory costs for the older doctor who might want to reduce his workload to an acceptable level for his aging years. Insurance protection is needed whether he practices two days a week or 65 hours per week.

A third factor is the sociological demand to keep up-to-date in an era of rapid change. Patients no longer automatically consider "Old Doc" the very best because he has been in practice for 30 years. They sometimes question if he has the knowledge and expertise of younger physicians more recently graduated from medical school. And his colleagues on the hospital staff are requiring stricter adherence to eligibility standards for medical and surgical procedures.

There is a considerable amount of work involved in closing a medical office. Before you can walk away from your practice, you must consider:

Informing your patients
Advance notice to your employees
Transferring medical records
Medical record retention
Medical insurance claim forms that come in after you have locked the door.
Cancellation of business insurance policies
Your narcotics license
Disposition of narcotics and medical supplies
Rent, lease contract, disposition of real estate
Office equipment and furnishings
The telephone
Memberships in various associations
Magazine subscriptions
Business bank account
Taxes
Keogh or pension program involving employees

In addition, you will want to carefully review your own insurance program, stock portfolio, other savings and investments and any real estate situations in which you may be involved.

You may also want to arrange for continued medical care for yourself and your family, perhaps including a medical-hospital insurance program.

Advance planning should start a minimum of two years ahead of the closing date. Many of the things you do will have to be accomplished in the last three months and even later, but you can be **prepared** to do them. For example, you may wish to give your patients three months notice, assuming a general type practice. The letter you will send to active patients can be prepared in advance. Your files can be checked for the "actives" and "inactives." For patients who indicate to you that they want their medical record information transferred to another physician, you can plan the best way to do this. (You will want to keep your records, of course, and forward only summaries or Xerox copies).

When and how to give notice to your employees is an individual situation problem. You will need adequate help in your office to the last days of practice and probably some assistance for some time thereafter. If you have career employees who want or need to continue to work, they will logically start looking for new positions as soon as they find out you have definitely specified a closing date. Perhaps you can arrange for a key person to stay with you until the end, or find out if temporary help is available in your area to fill in any necessary spot that becomes vacant.

You may find it advantageous to set a closing date to coincide with your rent or lease contract. You should check ahead with your county medical society or medical equipment distributor to find sources available for disposing of your office equipment, medical books, etc. Once the door is locked and the lease cancelled, these things have to be moved and putting them in storage is at best a temporary solution.

Make every effort possible in the last three months of practice to collect outstanding receivables. The collectability of old accounts declines radically after the office is closed. You might well consider turning uncollected accounts over to a medical collection service immediately after the closing date. The collection service should receive them quickly in order to achieve recovery for you.

Physicians who have practiced alone for years—by choice—may wish to acquire a partner for the last year or two of their practice, with the purpose in mind of providing uninterrupted medical service to patients as well as to have a ready buyer for their practice when that retirement date finally arrives. And, while patients appreciate the opportunity of gradually adjusting to a new physician, the new physician will also benefit from being introduced into an established practice, since this method typically results in high patient retention. ●

Digest of actions of the State Board of Censors

The State Board of Censors, at its regular meeting on July 20, 1977, took the following actions:

- Received as information request from AAPS for a contribution to support a project to defeat National Health Insurance.
- Accepted Mutual Assurance Society of Alabama as an affiliate employer under the MASA pension plan, with the stipulation that the accounts of MASA and MAS be kept entirely separate from one another, and that MAS be required to participate in expenses incurred on a pro rata basis. Also recommended that the re-employment provision in the trust agreement apply to affiliate employers as it does to original employers.
- Approved Contract Agreement between the Medical Association and Mutual Assurance Society.
- Received as information the Report of the Governmental Affairs Department.
- Endorsed Physician Recruitment Conference and Pre-Practice Seminar at Callaway Gardens on Oct. 20-23, 1977, sponsored by the Southeastern Institute for Community Health, Inc.
- Failed to endorse NHSC application for Hamilton Area on the basis that the information does not appear to be accurate.
- Received as information the Report of the Education Department.
- Received as information the Report of the Communications and Printing Department.
- Appointed David A. Justice, M.D., to fill the vacancy on the District 7 Peer Review Committee, which was left by Edgar W. Branyon, Jr., M.D. upon his election as Censor.
- Approved Resolution to amend MASA's Bylaws to include the Chairman of the Board of Censors as a representative to attend AMA Conventions.
- Deferred for one month the Resolution to amend MASA's Bylaws relating to associate membership for interns, residents and medical students, and instructed Mr. Mooresmith to re-define the amendment.
- Received for further study the Articles of Incorporation and Bylaws for establishment of the MASA Educational and Research Foundation, Inc.
- Deferred for one month a request from the Auxiliary to MASA to fund CPR seminars in order to train instructors for the public school system, until further information is received. ●

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☐ Emergency Room
☐ _____

Digest of actions—State Committee of Public Health

The State Committee of Public Health took the following actions at its regular meeting on July 20, 1977:

- Revoked the license of the Flint City Nursing Home, Inc., Decatur, for violation of the rules and regulations and stayed the revocation for 60 days with provision for a progress report in 30 days to permit corrective action.
- Referred the alleged violation regarding delinquent death certificates on behalf of Dr. J. J. Howard of Selma to the Attorney General for appropriate legal action.
- Reconsidered the allocation of tuberculosis beds for the Tuscaloosa area and reconfirmed the allocation of 15 beds to a hospital in that area subject to confirmation by the Committee.
- Was advised of the receipt of official Designation Agreement between the Secretary of HEW and the Alabama State Board of Health agreeing to a Conditional Designation of the Board as the State Health Planning and Development Agency July 1, 1977 - June 30, 1978.
- Appointed the following based on nominations submitted by the Statewide Health Coordinating Council to the Health Facilities Review Council, three providers—Mr. Dean H. Byrd Sr., HSA V; William Gammon, M.D., HSA IV; Betty W. Vaughan, M.D., HSA I; and consumers—Mr. Paul Jackson, HSA II; Mr. Joe McCluney, HSA III; Mr. Henry W. Suddath, HSA V; Judge William Branch, at large.
- Received a progress report on the Certificate of Need program and a schedule of future actions.
- Distributed a draft of the Procedures Manual for Certificate of Need for review and comments.
- Received a status report of nursing homes under Section 112 and noted that currently there are 231 beds under construction without approval.
- Adopted revisions of Section 112 Procedures Manual.
- Concurred in the initial issuance of Assurance of Need for 11 facilities.
- Concurred with favorable findings and recommendations for an addition of 25 beds to Lamar County Hospital in Vernon with provision for 15 temporary beds while construction is in progress.
- Approved a request from Hartselle Hospital, Hartselle, for a construction project which will result in a capacity of 129 beds upon completion and correction of certain deficiencies.
- Approved a request from Holy Name of Jesus Hospital in Gadsden which will result in 213 total beds upon completion.
- Took note of the Alabama Medical Facilities Plan under Title VI as a responsibility of the SHPDA and approved the review cycle for proposed revisions. The present Medical Facilities Plan is referred to officially as Medical Facilities Plan (Title VI) under Title XVI is implemented and Federal regulations have been adopted. At that time, the new plan would become Medical Facilities Plan (Title XVI) and would utilize a different review cycle.
- St. Martin's-in-the-Pines (Hill-Burton Right of Recovery). The question was raised regarding certain reporting requirements for facilities that have signed community service assurances. In view of legal questions which have been encountered regarding applicability, reporting action was tabled for one month to permit the receipt of additional information.
- Received favorable reports from the Office of Inspector General of DHEW regarding the operating policies and procedures as of March 31, 1977, for the Medicaid program under the State Committee of Public Health operation.
- Took note of the Governor's Executive Order No. 81 of June 16, 1977, transferring Medicaid to the Governor's Office for administration, which amends Governor's Executive Order No. 8 of June 30, 1967.
- Was advised of a support contract between the Medical Services Administration and the Alabama Department of Public Health to continue support functions for fiscal, personnel, data processing and printing functions by the State Health Department to enable an orderly transfer of responsibility under the Governor's order without interruption in service or disruption in medical care programs.
- Took note of the economy measures instituted by the Medical Services Administration under the Governor's supervision and noted that many of the recommendations were similar to recommendations made by the Committee at the last meeting with two exceptions: intermediate care facilities functions were continued and the provider cuts included an additional pharmacists' fee reduction.
- Took note of Judge Johnson's writ of injunction which enjoins state officials from failing to submit a plan in compliance with federal requirements with reference to nursing home payments and officially noted its dependency upon Medical Services Administration under the new direction to comply with the edict of the courts mandate due to the recent transfer of responsibility.
- Noted reappointment of R. O. Moore, D.V.M., as the Alabama Veterinary Medical Association's nomination for a five-year term on the Council on Animal and Environmental Health; he succeeds himself.
- Received a report from the Perinatal Advisory Subcommittee of the Council on Prevention of Disease and Medical Care. Directors of Level III Perinatal Centers are required to submit a plan during the coming month for each of their regions that would result in the proper expenditure of available funds excluding the carry-over recommended by the State Health Officer and specified that the plan include exact, detailed expenditures which would be brought back to the State Committee of Public Health for approval monthly to permit appropriate contracts by whichever level of care of nurseries are to be allocated funds.
- Acknowledged the support given by the State Superintendent of Education and educators throughout the state in promotion of the compulsory immunization law requiring basic immunization prior to school entrance. The percentage of children completing immunizations prior to entry into school has increased each year and a 95% level is expected this year.
- Was advised regarding progress in promotion of the Women, Infants, and Children Special Supplemental Food Program and certain administrative difficulties in connection with this program. ●

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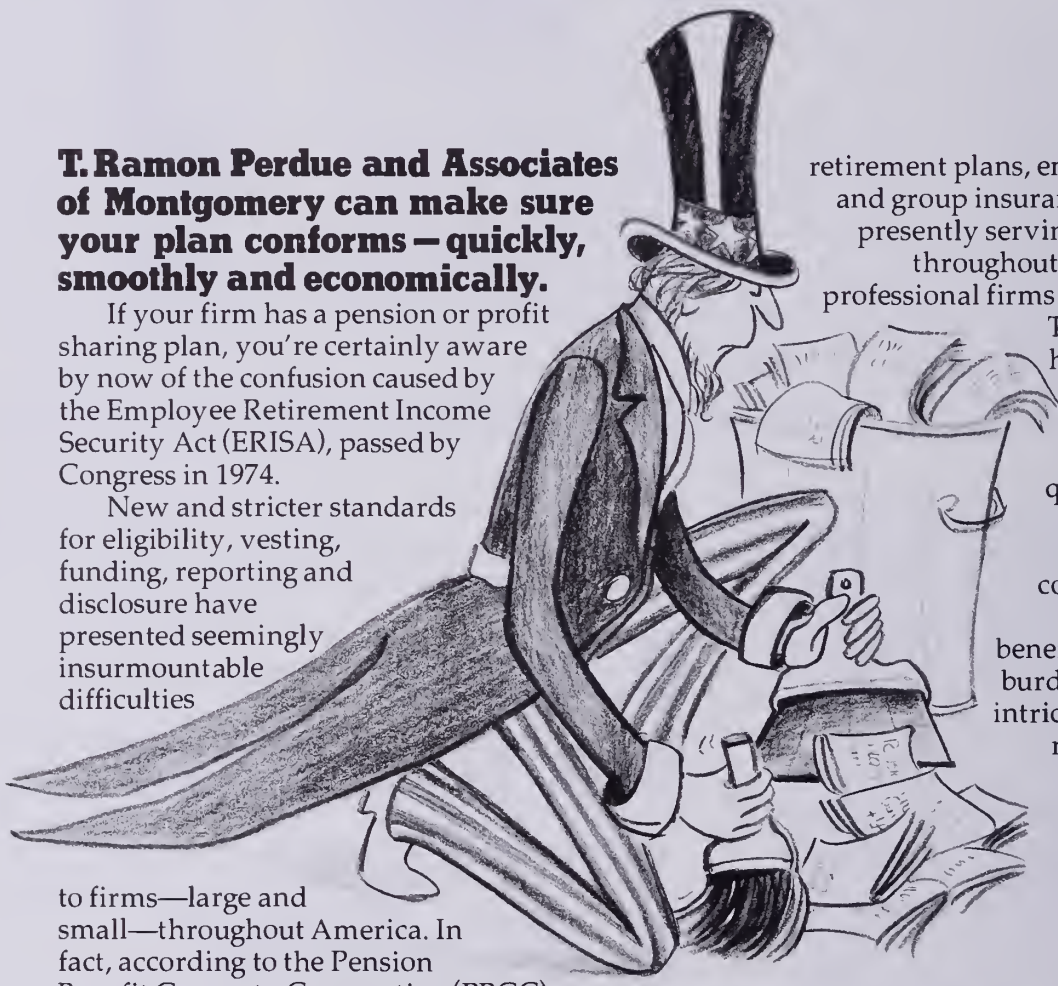
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Evaluating The Effectiveness Of Training In A Family Practice Residency Program

By
William F. deShazo III, M.D.*
and
Lindsey Davis, M.S.*

In 1976 the Family Practice faculty at Tuscaloosa undertook a study to determine techniques that could be used to determine the effectiveness of teaching in a Family Practice Residency Program. Hopefully, this paper will give some insight for the physicians of the state into our program.

Since the Family Practice residents are accepted from medical schools which differ in their educational methodology and philosophy, it is of vast importance that pre-assessment of individual cognitive knowledge and clinical skills be accomplished.

This goal has been achieved by mailing to the individual resident two months prior to his entering the residency a cognitive knowledge checklist and a clinical skill checklist. This information is reviewed by the residency director, who in turn relays this information to the chairman of each department so that he may be made aware of the strengths and weaknesses of individual residents. The department chairman uses this information to plan the individual resident's experiences and to improve or correct deficiencies.

A self-assessment test designed by individual departments is taken by the resident during the orientation period. The information gathered from this examination is used by the department chairman in structuring rotations to meet the individual needs of the resident.

The next step in the evaluation system is to assess the individual performance of residents as they negotiate the curriculum. Again, it is the policy to use a variety of evaluation mechanisms which may serve to give a more complete picture of a resident's performance.

The residency program uses six evaluation mechanisms to evaluate the individual progress of each resident.

1. Service Specific Evaluation Forms

The residents are observed by clinical physicians and rated on evaluation forms specific to the expressed goals and objectives of each individual rotation. While the forms vary to some extent in detail, the basic areas which are generally covered on each one are anatomy and physiology, emergency care, pharmacology, appropriate use of clinical skills, interest and industry, medical maturity and judgement, reliability and dependability, attitude, interpersonal relationships, communication skills, and cognitive knowledge. These evaluation forms are reviewed by the residency director at the end of each rotation and appropriate intervention made if deemed advisable.

2. Patient Satisfaction Index

Periodically, a random sample of a resident's patient panel will receive a patient satisfaction form. Each patient is asked to evaluate the resident in terms of their satisfaction with his performance.

3. Chart Audit in the Family Practice Center

We utilize a criteria specific chart audit as employed by the Medical College of Virginia, which was developed from an approach designed by the Joint Commission on Accreditation of Hospitals. Both outcome and process audits are used for selected clinical problems. This method serves a dual purpose. First, it allows us to compare the resident's performance against that of the entire resident group and faculty. Second, it helps the faculty to determine if they are conveying to the residents the habits and actions felt to be essential in caring for a particular medical problem.

4. Video Observations and/or Taping

Periodic observations by video tape is carried out on each resident by family medicine faculty. This documented experience becomes the focal point for discussion with the resident in terms of his/her ability to conduct effective interviews and physical exams.

5. Self-Assessment Tests

These tests, taken during the orientation period, are repeated following the completion of core rotations. It is hoped that these examinations will show professional growth as well as persisting weaknesses. The examinations are currently being validated.

6. Review of Resident's Practice Profile

A computer print-out of each resident's practice by diagnosis is obtained and reviewed. This is done to assure a complete experience in the Ambulatory Care Center. If deemed necessary, a computer print-out may be requested of the hospital to assure adequate hospital experience. These print-outs may prove invaluable as the resident leaves the program to seek hospital privileges elsewhere.

7. Performance Review

At the end of the core curriculum the residency director reviews with the individual resident his/her past performance on each rotation, and the resident's evaluation of the service. At this point, the educational needs for the

*College of Community Health Sciences, University of Alabama, Tuscaloosa, Alabama.

RESIDENCY TRAINING PROGRAM

CONTINUED FROM PAGE 51

remainder of the program are planned with the resident to increase his/her knowledge and skills in the areas agreed upon by both the resident and the director. If there are suggestions made by the resident to improve the overall program, they are noted and if necessary discussed with the faculty members.

The final step in evaluating the residents and the residency program will be long-term evaluation techniques. Of special interest will be such things as where residents choose to practice, whether they eventually drop out of Family Medicine and go into other types of medical care delivery, self-report of the residents as to their personal satisfaction with their work, a resident's participation in continuing education activities and whether or not they are certified in Family Medicine and continue to be recertified. The process of long-term evaluation will be difficult to develop, but we hope to identify measures which can be followed longitudinally so that we might get some insight into the impact our residents are having on the health care of the communities which they choose to serve. ●

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HOUSE CALLS

It was shortly before noon on Sunday in the rural Shippensburg, Pennsylvania home of the LeRoy Davises, where 17-year-old LaDonna Davis had been vomiting and suffering bouts of diarrhea for most of the morning.

Suddenly her mother heard a slumping sound in the bathroom and went in to find LaDonna unconscious on the floor, her body a strange and frightening yellow in color.

Mrs. Davis screamed for her husband, and the two carried the motionless girl to her bed. Then Davis called the family doctor, but this was his weekend off. However, William A. Freeman, M.D., one of Shippensburg's six family physicians in the community's two medical groups, was "on call," and the Davis call was transferred to his office.

Davis quickly explained what had happened to LaDonna and described her present condition.

"Lay her flat and elevate her feet," Dr. Freeman said calmly. "I'll be right out."

Leaving his waiting room of Sunday morning patients, the 38-year-old physician grabbed his bag and ran to his car. In 10 minutes he had arrived at the Davis home, five miles out in the country, and begun his examination of LaDonna.

By the time he left, half an hour later, the high school senior was stable, her condition had been diagnosed as a viral illness, and medication had been ordered.

The Davises thought it extremely "kind" of Dr. Freeman to make the house call, "his not being our own doctor and all," but not unusual. And it seemed to Dr. Freeman appropriate to handle the Davises' plea for help by hurrying to the house to see LaDonna.

House calls are still part of the practice of medicine for the six physicians in Shippensburg, a community of 7,000, but whose patient area covers some 20,000 persons.

"We try to encourage people to come to the office," Dr. Freeman explains. "If they're nauseated or very sick or disabled in some way, we try to see them right away—have them come in the side door and bypass the waiting room. That's our compromise."

However, there are valid reasons to see some patients in their homes, Dr. Freeman states. "Certain injuries, such as a possible hip fracture, where an examination at home might obviate a several-mile trip to the hospital for X-rays, certain abdominal and chest disorders, bedfast patients and other indicated conditions—there are times in the middle of the day and night when we just have to pick up our things and fly out to wherever the sick person is."

A standard of judgment for Dr. Freeman is "the kind of case where if I were the patient or the concerned family, I would want the doctor to come out. I try to look at it that way."

The young physician says he does not begin to match the house call circuit of his 66-year-old father, Dr. Albert Freeman, whose 40-year-old practice the son joined in 1967. "Dad has the bulk of the older patient load," Dr. Freeman says, "so he makes many more visits to their homes and to those who are in nursing homes. It used to run as many as seven to 10 a day, but it's down from that now."

The third member of the Freeman group is Dr. John Breneman, originally from the Shippensburg area, who returned there last October after five years as a medical missionary in Bangladesh.

"We were so busy before John got here that we had to stop taking new patients for a while," Dr. Freeman recalls. "That was when we began to push some of the people harder to come in to the office than they really wanted to be pushed. But we tried to make them understand that it takes 45 minutes to an hour to make a house call. By the time you get your things together and get out to the house and see the patient and get back, you've taken up the better part of an hour. One house call takes the time it would take to see three or four patients in the office, so it is time-consuming. There are only so many hours in a day, and house calls mean office patients must wait."

But Dr. Freeman adds, "I don't know how people survive in areas where they don't make house calls. There are just too many patients who for one reason or another simply can't come in to the office."

While there is a volunteer ambulance service in Shippensburg, there are reasons why the physicians do not use it in place of house calls.

"Because ours is a volunteer service," Dr. Freeman explains, "the ambulance crew must leave their jobs, go get the patient, and in many cases wait and return them to their homes. That's an imposition for working people, dedicated as they are. If a patient is to be treated at home as an outpatient, we try for the most part to go to the home and make that determination before an ambulance crew is called."

Dr. Freeman sees rural health doctors as needing to respond to special needs. For example, he, his father and Dr. Freeman, and the three family physicians in the other practice in Shippensburg rotate weekend call, which also means holding office hours on Saturday evening, Sunday morning and again on Sunday evening. The weekend hours are basically for emergencies, but there are always a number of chronically ill people who need attention during those times, Dr. Freeman relates.

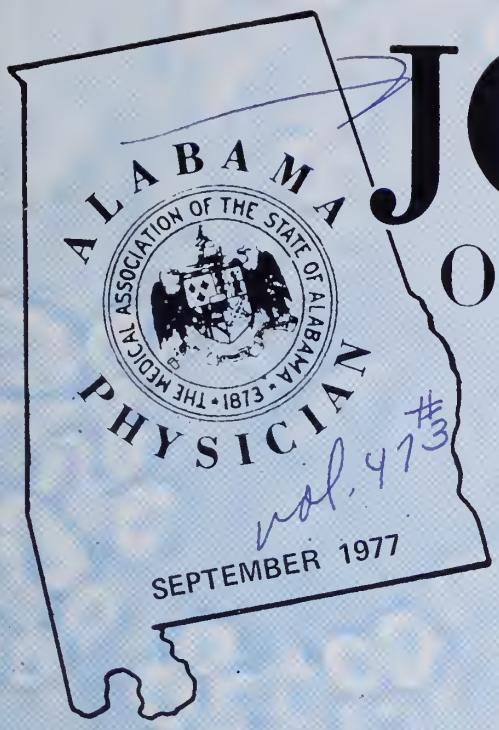
Last fall, Dr. Freeman, his father and Dr. Breneman dropped their active hospital privileges in Chambersburg—15 miles away—for courtesy staff status, since they feel that referring patients for specialty or hospital care is the proper action for them to take, resuming their care upon the patients' return.

"In small town rural America, there aren't nearly enough family doctors," Dr. Freeman says. "Our job is to tie together the whole medical bag—which is what people want the family doctor to do. We care for the conditions we can handle in our offices and direct patients into the extended health care system where referral is indicated. We need to get them into the right channels and then get them back out at the appropriate time. That's the real role of the family physician today."

Dr. Freeman insists that his attitude toward the particular responsibility of the rural family physician—house calls included—is not unique to him or his practice.

"The three doctors in the other family practice here in Shippensburg and physicians in other area family practices such as Dave (Dr. David M.) Rahauser's group in Chambersburg and Pete (Dr. Donald E.) Piper's group in Dallastown all have similar philosophies," he says.

"We make a real honest effort to provide the care our patients need."—Courtesy of the AMA ●



JOURNAL

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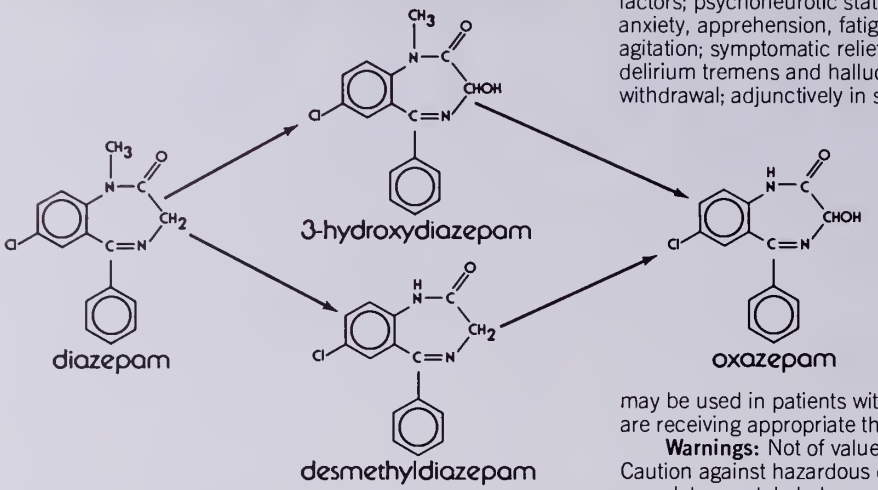
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Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

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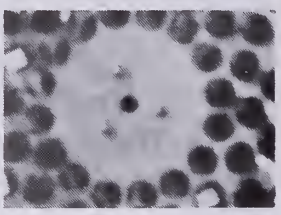
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CPR FOR PHYSICIANS

It all began innocently enough with this idea: Since CPR had become so popular nationwide, MASA might consider a Public Service Announcement for television, urging citizens to take training in the life-saving technique.

First, it was the opportunity of the Council on Public Affairs, meeting in Birmingham July 10, to have its say. The Council demurred, chiefly because of the report that the American Heart Association, Alabama Affiliate, didn't have the equipment to meet what would surely be a heavy demand for the training if Alabama physicians urged the public take it.

While trying to ascertain just what resources were available, particularly in private hospitals, the Subcommittee on Association Affairs subsequently threw the question to the Council on Medical Services.

Meeting in Montgomery Aug. 14, that Council made its views known: physicians should not advocate that the general public learn CPR until they themselves learned it. One member even suggested that knowing CPR should be made a condition for membership in MASA, just as it has been made a requirement for staff privileges in some hospitals in the state.

The Council backed away from that, but it did urge that the *Journal* begin a series on CPR for physicians by a qualified expert on the subject. By general agreement, that expert was John M. Packard, M.D., director of Medical Education, Baptist Medical Centers, Birmingham.

Dr. Packard is Clinical Professor of Medicine at UAB School of Medicine and Chairman of the Emergency Cardiac Care/Cardiopulmonary Resuscitation Committee of the American Heart Association, Alabama Affiliate.

His series of articles, which will continue as long as he, in his judgment, thinks they should, begins in this month's *Journal.* He opens with a short essay on the need, with some impressive, even startling, statistics.

S. Lon Conner
Executive Director

INFORMATION FOR AUTHORS CONCERNING MANUSCRIPTS

Manuscripts should be typewritten, double spaced on white paper 8½ x 11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain in the order given: Name of author, title of article, name of periodicals with volume, page, month – day of month if weekly – and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

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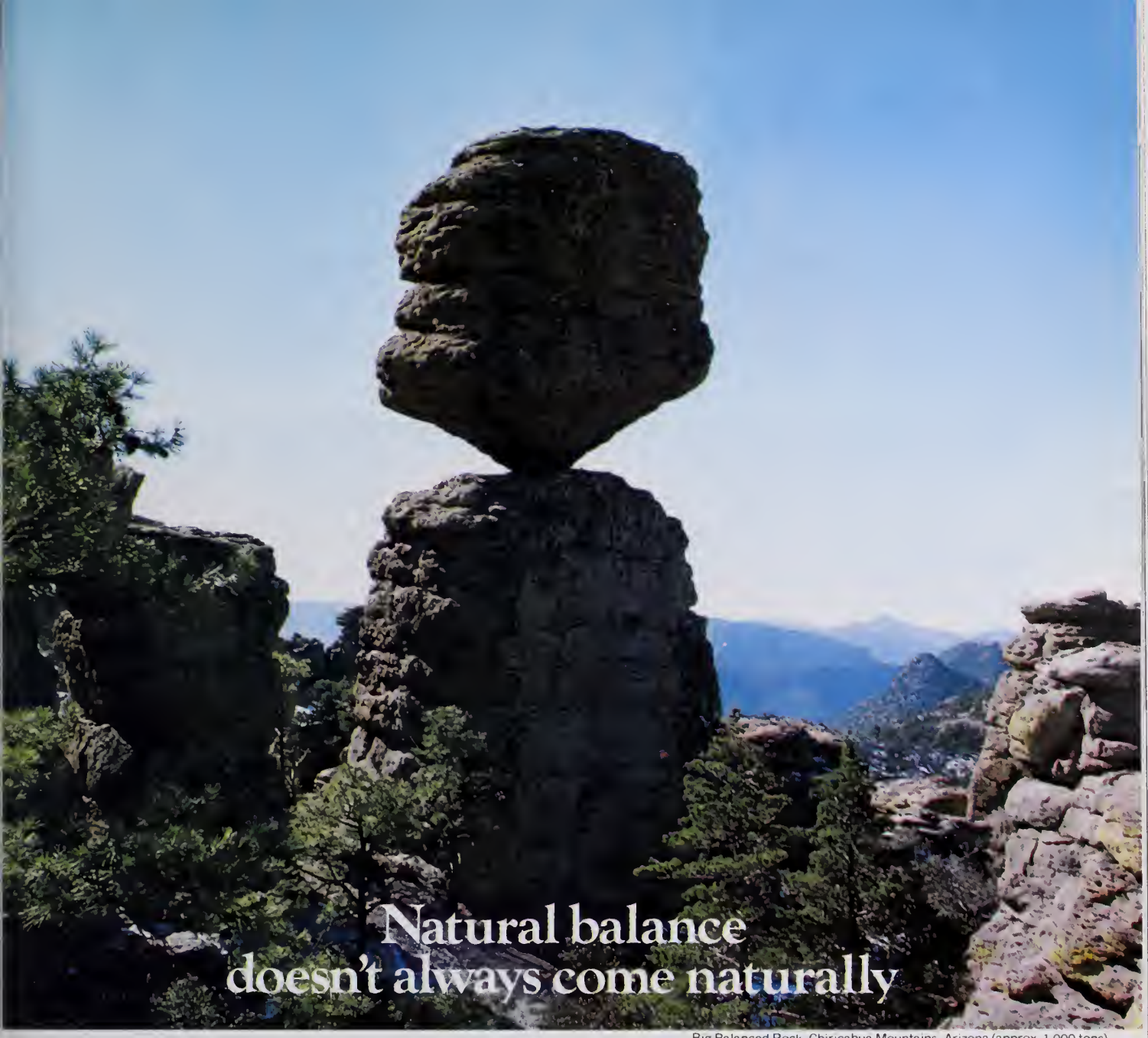
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ABOUT THE COVER

The photomicrograph on the cover is of the cytopathic effect of herpes simplex virus growing in tissue culture, original magnification x 450, courtesy of Richard J. Whitley, M.D., University of Alabama in Birmingham, author of the scientific article on the breakthrough in the drug therapy on this disease, which appears on page 37. A separate article about the historic work of Dr. Whitley and Dr. Charles A. Alford, also of UAB, appears on page 32. The photograph of the two researchers on page 33 is by the author of that article.



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Final classification of the less than effective indications requires further investigation.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

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Usage in Children. Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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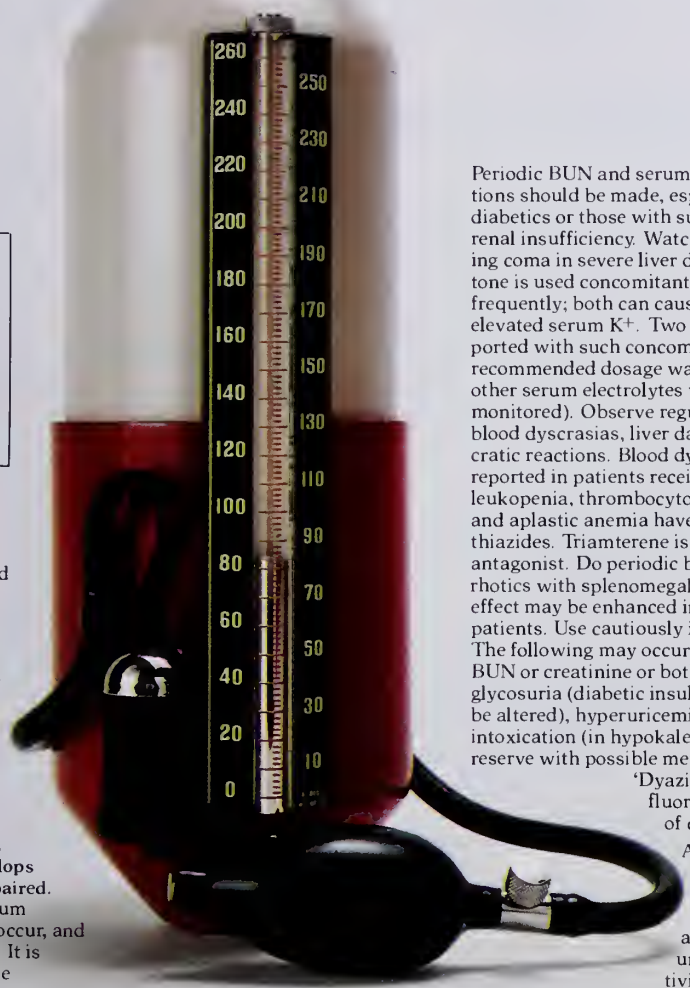
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* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

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Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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Interaction with other CNS depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, tranquilizers, sedative-hypnotics, or other CNS depressants (including alcohol) may exhibit additive CNS depression; when used together reduce dose of one or both.

Usage in Pregnancy. Safe use is not established. Should not be used in pregnant patients unless potential benefits outweigh possible hazards.

PRECAUTIONS: Head injury and increased intracranial pressure. Respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute abdominal condition. These products or other narcotics may obscure the diagnosis or clinical course of acute abdominal conditions.

Special risk patients. Administer with caution to certain patients such as elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, or prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS: Most frequently include lightheadedness, dizziness, sedation, nausea, and vomiting; more prominent in ambulatory than in nonambulatory patients; some may be alleviated if patient lies down; others include: euphoria, dysphoria, constipation and pruritus.

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For symptoms and treatment of overdosage and full prescribing information, see package insert.

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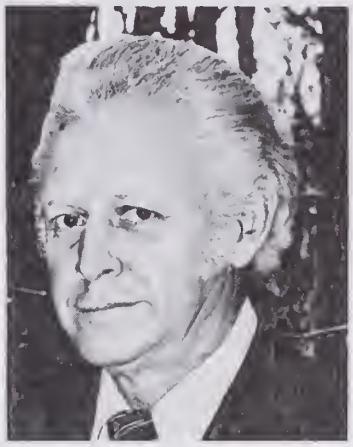
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'Plainly Speaking'

I have said, as a major objective of my year as President of MASA, a concerted effort should be made to provide an opportunity for every region of the state and every specialty within the state to have a voice in this Association's affairs. This is not only essential as a matter of principle for a democratic organization; it is essential as a working concept for your State Association's staff, officers and Board of Censors.

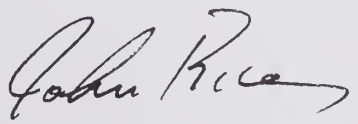
The Constitution and Bylaws are not chiseled in stone. Article 9 of the Constitution provides a mechanism for Bylaw changes at any business session of the Medical Association. The constitutional changes are also provided for in Article 10. It is my firm conviction that reasonable men and women can come to reasonable accommodation in open debate for the benefit of all. Being well informed is a necessary ingredient for effective and intelligent change.

Any resolution proposing major change in the Association's structure *should* carry a fiscal note which provides an estimate of the cost of such change. (This is my prejudice, why I believe change should be efficient, economically as well as politically.)

As a member of The Medical Association of the State of Alabama, you will share in its successes and failures, in its praise and criticism. Our reference committee system at our annual meetings gives you an opportunity, individually or as a county representative, to propose, to support, or to criticize any action of your officers.

"Although advances in medicine depend on the generation of knowledge, changes in the health care system depend on the alterations of social and political values."

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FUTURE HEALTH SERVICE

By
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A recent article in a major national newspaper carried the following page one headline: "New United States Problem: Too Many Doctors." The article cited a recent study by the Department of Health, Education & Welfare which predicts a substantial increase in the number of physicians per capita in the next 13 years.

After a capital outlay of $3.5 billion over a 10-year period, 1963-1973, the pendulum is swinging to the opposite extreme—too many doctors. The state of Alabama does not suffer from this problem and few believe that the state will face the dilemma of a physician oversupply anytime in the foreseeable future.

While the study admits that this oversupply of doctors is a phenomenon of the large urban areas, any attempt at redistribution of physicians to rural, underserved areas has not kept pace with the renewed supply of physicians to the metropolitan areas. The New York Metropolitan area has about 800 doctors per 100,000 population; Mississippi, 80 per 100,000; Alabama, 100 per 100,000.

While some states are immediately identified as having low physician/population rates, a brief review of the underserved areas tabulated by the Public Health Service proves that no state escapes the appellation of being underserved in some geographic areas.

What Is The Answer?

What is the answer to the physician shortage problem that faces every state of the Union to a varying degree of urgency? A physician redistribution program called the National Health Service Corps was introduced recently. It is utilizing much of the same enthusiasm that characterized the Peace Corps, the expression among medical students of a newly found idealism to attack the health problems of the underserved areas of the country.

The United States is large, the underserved areas are many, and regretfully, the National Health Service Corps physicians are too few. Although the program continues to provide vital assistance and the enthusiasm remains undimmed, the need is too great.

Although no one has a guaranteed answer to the shortage of physicians and the provision of modern health care in the smaller towns and rural areas, there are several promising approaches.

The decentralization of medical education and the development of family practice residencies are two of them. However, they must be combined with educational components that help young physicians understand the culture, the values and the way of life of rural people. This is one of the reasons why many believe that medical students who come from a small town background are more likely to return to such a community to practice. This has implications for the admissions policies of medical schools trying to meet the health needs of their state.

Medical students and residents need, as part of their training, an opportunity to experience life and medical practice in a small town setting. For many of the smaller towns, the old stereotype of poor educational opportunities for children and the lack of cultural advantages is no longer true. The environment for living and for raising a family in a small town is much better than in many urban settings.

The placement of physicians in a small town must include an organic relationship of the physician with a regional medical center such as Tuscaloosa or Huntsville, for example. This can provide continuing education, consultation and referral services for the physician and when appropriate, it permits the assignment of students and residents to them for part of the students and residents training. This will eliminate the sense of medical isolation and provide intellectual stimulation which is so necessary if a physician is to avoid practicing outdated medicine within a few years.

Solo Practice Is Over

The necessity for group practice must be recognized because virtually no young physician will enter solo practice in a small town anymore. The mortality rate among groups is high and young physicians need to know the interpersonal and financial relationships as well as other problems that can lead to the stability of a group. This should be part of his training program.

Finally there needs to be some understanding by and survey work done with the community that wants a physician. There must be interchange with its present physicians, if any, as well as hospital boards and administrators, and lay leadership. These people need to know what to expect from a young physician or group, how to organize to solve local problems and to attract physicians to practice there.

Young, recently trained, physicians do not practice in the manner that the older physicians practice and the community needs to know this as well as the differences. Consultation to communities is a logical function of a family and community medicine department working with other components of an educational institution which has residents to place as well as residents and students to train.

Satellite Primary Care

There are communities that cannot hope to attract a physician in resident, but the population needs services. Many of the people in such communities find transportation to a larger center difficult. They can be served by satellite primary care centers staffed by physicians from a town not too far away. The problem with this approach to date is that there are two few groups in suburban or rural Alabama towns and most physicians in such towns are already overworked.

Hopefully, this condition will change in time but with it must come a change in the attitude of physicians. It is not enough for them to take care of just the patients that come to their office or whom they see in the hospital. They must look at the needs of the region they serve and assume some initative in helping to meet these needs. A medical education center such as that at Tuscaloosa can provide some help and guidance to physicians and communities in this effort.

Can those physicians in rural Alabama use their time more efficiently and serve more people who really need their professional skills by utilizing allied health personnel? Practically every physician has one or more "physician assistants" whom he has trained, and this helps. However, there are many kinds of allied health workers, some relatively new like the nurse practitioner and others more established such as nutritionists, public health nurses, social workers, and psychologists, to name a few.

If these allied health personnel work under the supervision of a well-trained physician who knows how to use them, they can be most helpful. Physicians are gradually learning to use them and those who complete modern training programs should know how they can be used.

There are problems, however. Roles are not always clearly delineated. There are problems of professional status and a fear that some of these groups may attempt to practice medicine without the adequate supervision of a physician. If the physician can learn to lead his team, not to boss it, he need not fear that these allied health workers will become independent. And thereby, the physician will not lose his role as "captain of the team." Unfortunately, the problem of financing the services of many allied health workers has not been satisfactorily resolved, but in time, it will be.

Change In Health Care Delivery

Nevertheless, if the public is to be served better at lower costs, and if the physician's time is to be used more efficiently, the physician must learn to use these allied health workers and incorporate them into his team. This represents a developing trend, a change in the pattern of delivery of health service, new dimensions in the teaching of medicine and in our view, of the biological limitations of illness.

In the future, the automatic reaction of the patient to illness will not necessarily steer him to a physician, but many times to a member of the physician's team. The health system will become more selective in assigning patients to physcians who really need his skills and will utilize more often the services of his team of allied health workers.

The next logical step is a sophisticated lay health education program for which each state should assume responsibility. This will prepare each individual to assume more responsibility for his or her own health and to approach health care with a large measure of intelligence based upon the knowledge of the influence of lifestyle upon health as well as a rational self-diagnosis of what level of assistance he or she should seek such as the self-prescribed aspirin or a visit to the doctor's office to see a physician or a member of his team.

Wiser Use Of Time

What effect would such broad multidisciplinary, multilevel health program promise for the future? A wiser use of the physician's time, limiting his attention to more serious illness, and using less expensive health professionals when it is appropriate to do so. It would ease the problem of limited numbers of physicians in the smaller towns and rural areas by using allied health personnel to a greater extent.

An intensive lay health education program would be immensely valuable. Finally, there needs to be a general awareness that health is not a concern only when one is ill, but that it is a continuing facet of our lives for which a broad spectrum of services is available, not the least of which is what we can do for ourselves. ●

Why me?

The Need To Learn Cardiopulmonary Resuscitation—(CPR)

By JOHN M. PACKARD, M.D.*

Why all the fuss about Cardiopulmonary Resuscitation (CPR)? Why do we see TV spots urging the general public to learn CPR? Why is the JCAH urging hospital medical staffs to include CPR proficiency in the medical staff by-laws? Why should *all* physicians, no matter what their specialties, learn CPR?

First of all, it saves lives. We've known that since the early 1960s when training was limited to medical, nursing and allied health professionals. Ten to 15% of patients resuscitated in the hospital survived to be discharged. Over the past 10 years, large segments of the general public have also been trained in CPR with impressive results from resuscitation efforts in the 350,000 cardiac arrests that occur annually outside the hospital.

A small study from the University Hospital in Birmingham highlights the difference: of seven patients with cardiac arrest in whom CPR was started by bystanders within two minutes, six survived to leave the hospital; of 12 other cardiac arrest victims where the start of CPR was delayed for five minutes or more while awaiting the arrival of the rescue squad, only six were discharged alive, and five of these had evidence of neurologic damage.

Larger series from Norway and Seattle (where 20% of the population has been trained in CPR) confirm the importance of bystander CPR: In Norway, of 75 patients resuscitated by bystanders, 36% survived, while of 566 patients where resuscitation was performed by the rescue squad after five minutes, only 8% survived. In Seattle, with over 1,000 patients, the bystanders are successful in 46%; the rescue squads in 18%.

Why are these figures important to physicians? We may be bystanders ourselves some day. Poorly performed CPR may lead to loss of the victim's life or to the loss of the physician's self-respect if a lay person takes over and performs well. Indeed, poorly performed CPR has resulted in law suits against the untrained physician.

In the hospital setting, someone else is usually performing CPR and we physicians can concentrate on definitive therapy with drugs or defibrillation, but not always. We must be prepared to do so well, if not better, than our nurses, respiratory therapists and other allied health colleagues in *basic* life support.

In summary, physicians need to learn basic CPR to save lives, to save our self-respect and to protect ourselves and families against law suits. We might also teach this skill to our colleagues, friends and neighbors.

To set up a CPR training program in your hospital, check with the in-service training director, or call one of the physician members of the Heart Association's ECC/CPR Committee, who will help arrange a course.

These physicians are: Dr. Ed Battersby, Huntsville; Dr. Willis Israel, Wedowee; Drs. John Hard, John Packard and Rick Ransom, Birmingham; Dr. Earl Simmons, Montgomery; Dr. Stan Griffin, Dothan; and Dr. Philip Snodgrass, Mobile.

Future articles will discuss the techniques of CPR and of Advanced Cardiac Life Support. ●

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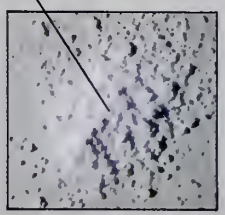


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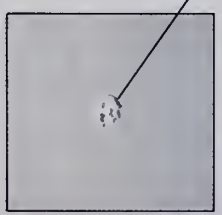
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References: 1. Goodman, L.S., and Gilman, A., eds.: The Pharmacological Basis of Therapeutics, Fifth Edition, New York, The Macmillan Company, 1975 (a) p. 335, (b) p. 336, (c) p. 344. **2.** Eden, A.M.: Am. J. Dis. Child. *114*:284-287 (Sept.) 1967. **3.** Mintz, A.A.: J. Ky. Acad. Gen. Pract. 5:26-31 (Jan.) 1959. **4.** Colgan, M.T., and Mintz, A.A.: J. Pediatr. *50*:552-555 (May) 1957. **5.** Saunders, D.C.: Practitioner *183*:335-338 (Sept.) 1959. **6.** Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryngol. *80*:214-217 (Aug.) 1964.
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Health Delivery Cost Control

By LEON C. HAMRICK, M.D.*

First presented at the Health Care Financing Conference sponsored by the Center for Public Law and Service of The University of Alabama College of Commerce and Business Administration, College of Community Health Sciences, School of Law and Capstone College of Nursing on April 29-30, 1977.

The costs of health care are rising more rapidly today than at any time in our nation's history; and a brief review of these costs will hopefully add perspective to our overall discussion today.

Our national health expenditures during fiscal year 1976 reached $139.3 billion. This 1976 total represented a 14% increase over the estimate of $122.1 billion in fiscal year 1975. When considering the total increase during the preceding year with this past fiscal year, costs have risen by $33 billion or 31%. In comparison, the economy in general has grown at a slower pace of 18% over these same two years.

When looking at per capita expenditures or at the gross national product we again see the same trends. In 1970 the per capita expenditure for health care costs was $334 compared to $628 in 1976. In 1965, 5.9% of the gross national product was spent for health care costs; in 1970, 7.2%; and in 1976, 8.6%.

A closer look at where health care dollars are spent, using 1976 figures, shows the following breakdown:

Hospitals	$55.4 billion	39.8%
Physicians	$26.4 billion	19.0%
Drugs	$11.2 billion	8.0%
Nursing Homes	$10.6 billion	7.6%
Dentists	$8.6 billion	6.2%
Research & Construction	$8.3 billion	6.0%
Other costs	$18.8 billion	13.5%

Problems And Trends Influencing Increase In Cost—A first requirement in trying to come to grips with the problem is to identify problems and trends that have contributed to the rising costs.

Many thoughts and ideas have been expressed by many sources and in many ways on this particular aspect with emphasis often as not being colored by one's interest – be he or she "provider," consumer, insurer, business or governmental sponsor, newsman, etc.

While not attempting to cover these strictly in order of impact, discussion of a number of these is in order.

1. *Technological Advances*—Advances in diagnostic and treatment procedures have had considerable impact on both health care costs and on prevention of deaths attributable to major killers such as heart disease, cancer, stroke and kidney disease. Heavy sums have been and are being expended to the extent that quality of life is improved and maintained while the life span itself is being lengthened.

2. *Increasing Staff/Patient Ratio*—This is impacted by the above described technological advances and by improvement in the quality of staffing selected services such as coronary and intensive care units, renal dialysis units, full time physician coverage in emergency rooms, and many other services now available which were not a short time ago; increased staff has also resulted from increasing regulatory requirements for nursing and other services in hospitals and nursing homes.

3. *Reporting Requirements and Standards*—Added paperwork and adherence to strict governmental reporting requirements contribute to the overall rise in health care costs, particularly with the growing number of Medicare and Medicaid patients. When looking at the number of copies of patient records reproduced and transmitted from my own hospital, I shudder to think of the volume country-wide!

There is much too much overlapping of regulations and regulatory requirements for health care institutions. This often causes administrative nightmares and budgetary strain.

4. *Physical Plant requirements for Comfort and Safety*—Many ideal and even utopian ideas concerning safety have crept into mandatory regulations pushing costs inordinately higher in order to come into compliance. An example of this is the proposed requirement that low voltage wires be carried through conduits in hospitals in spite of the fact that there has never been a fatality from contact of these low voltage wires.

Twenty-five years ago, none of the three hospitals that I trained in could boast of air conditioning even in the surgical suites. Today, regulations requiring high efficiency filtration and/or non-recirculation of air in certain areas is another example of significant cost increase. So when you start comparing costs of 1950 to today, the cost of machine and power must be taken into consideration as well.

5. *Unnecessary Services*—The demand for and provision of unnecessary services during hospitalization, such as color television, bedside phones, special select foods, etc., add to the comfort and enjoyment of the patient; but they also add to the cost of hospitalization.

6. *Liability Insurance Cost*—A 300% jump in cost from 1975 to 1976 was common for Alabama hospitals, and reports of up to a 1,000% increase in other areas of the country for the same period has been noted. Costs to physicians over the past two years parallel this experience.

7. *Inappropriate Use of Health Care Resources*—Inappropriate use of resources by patients and physicians together in order to obtain third-party coverage of testing, or custodial care of particularly the elderly who could otherwise be cared for in the home are abuses worthy of consideration.

Health Delivery Cost Control

CONTINUED FROM PAGE 15

8. *Demographic Changes*—Population changes exert no little effect on health care costs and with each year exert more. Our country is not only becoming more populous, people are living longer; older people have more health problems and require more and longer institutional care. The oldest 10% of the population accounts for more than 33% of inpatient hospital days.

9. *Government Health Care Programs*—The availability of Medicare, Medicaid, and other federally subsidized programs contributes enormously to health care cost. This is not to say they are not needed or justified, but merely reflects that if coverage was not available, people would go lacking for care and the total cost would be substantially less. A brief look at the people covered would indicate they fall in a group whose problems number more and whose overall cost for care is probably greater than for the population as a whole.

10. *Broader Benefits and Wider Eligibility*—Insurance now pays 90% of hospital bills, and 65% of physician care expense. Twenty-five years ago the patient paid two-thirds of his medical expenses. Without saying this is good or bad, one would have to agree that health insurance has at least modified the restraint of the beneficiary in seeking health care, particularly in those programs in which the beneficiary does not contribute to the cost of insurance.

11. *Fraud and Cheating*—Without doubt this exists. You all have read or know of instances where this has occurred; while this is not the culprit accounting for the bulk of increased health care cost, it should not be ignored. Overutilization, whether it be instigated by provider or consumer, and while technically not illegal, accounts for far more unnecessary cost than out-and-out fraud.

12. *Inflation*—General inflation in goods, services, and labor has its impact on health cost care just as it does on the general economy. The field of health care is probably more valuable to inflation in the area of ever increasing technology and demands and because it is labor intensive; yet it presently compares favorably to other fields in such areas as labor costs. However, 10 years ago and in subsequent years after coming under minimum wage standards, hospitals did have significant "catching up" to accomplish.

Cost Containment—Now that we have explored some of the problem areas contributing to increased health care costs, let us turn to areas in which we may find opportunities for cost containment:

1. *Cooperativeness*—First of all, I believe it is imperative that all of us — physicians and other health care personnel, institutions, consumers, insurers, and government — stop blaming each other; indeed, all of us as a part of our social, environmental and physical makeup are responsible to some degree for the escalation of health care costs, and it's time we accepted this and turned to working out solutions.

2. *Priority Setting*—Now if we are going to accept, or be forced into, limiting health care cost, our decisions must be based on setting priorities so that our budgeted dollars will accomplish the greatest good; and in pursuit of this somewhere along the line tough questions including those affecting the quality of existence of some or the shelving of life—saving innovations for others until they are cost effective may have to be faced by the health care provider and the public.

3. *Preventive Measures*—Health education, without doubt, is one of the cheapest and could be one of the most effective measures in prevention of disease and infirmity.

Patient and public education with efforts at preventing or minimizing illness and injury even to the extent of involving steps toward fundamental changes in living practices would most certainly have an impact on health status and thus in reducing health care costs.

One needs only to look at the problems caused by alcoholism, smoking, poor diet, accidents at home, work, and in motor vehicles, and violence committed on others, to see where great dividends are possible.

This merely scratches the surface. Areas such as family and perinatal counselling, genetic screening, better self-care in chronic disease and many other areas need addressing; and much of the educational process needs to be begun early in one's life and general educational experience.

Other levels on the ladder of prevention affecting health care costs are immunization, early diagnosis and treatment, disability limitations, and rehabilitation.

Someone is falling short in this enlightened country of ours when there are 18 million children who have not received polio protection and 15.5 million who haven't been immunized with DPT (the most commonly used immunizing agent) against diphtheria, whooping cough, and tetanus. I must say in Alabama we are doing a more creditable job since the passage of the pre-school immunization statute.

4. *Cooperative or Merging Services*—Not every hospital needs an open-heart suite, a cobalt unit, a linear accelerator, or computerized scanner. Highly specialized care, seen in these examples, should be limited to given institutions in order that utilization may approach economic reasonableness. Just to keep up with the Joneses or the fear that someone may get ahead of you, should not be justification for unneeded expansion or duplication of services.

5. *Utilization Review and Professional Standards*—Much concern has been wafted over these areas. I would have to agree that they are intrusions on the patient, the physician and the institution and the thought that they are needed is obnoxious. However, it is my contention that if a conscientious job is both rendered and accepted, this sacrifice to the fiddler can be tolerated.

* FOR CORRECTION SEE p. 62 - Oct. issue

Hopefully, out of these measures, patient and provider at the grass roots level can be shown, at significant economic savings, that cost can be lowered by eliminating unnecessary admissions (to both short-and long-term care institutions), excessive stay, and improper use or abuse of therapeutic and diagnostic services without reducing the quality of care.

6. *Liability Insurance Cost*—Debate in this area has been heard long and loud in hospital corridors and lounges, physicians and insurance company offices and meeting places, from members of the Bar, and in legislative halls. Gains have been made in tort changes, ever so grudgingly, without adversely affecting the bona fide claimant; yet there is room and need for more change when rates for insurance have soared in Alabama to $500 per hospital bed per year and to $7,000 annually for an orthopedic surgeon or obstetrician and in many other areas of the country tripled and quadrupled, and even higher than these figures. These are health care cost items and as such are in finality passed on to the person paying the bill for health care.

Above all, there needs to be a common understanding that medicine and surgery is not always an exact science and there are no guarantees that living tissue will react in the same way or produce the same result 100% of the time.

Defensive medicine practiced from conscious or subconscious fear that something might possibly be overlooked and later fuel a liability claim has undoubtedly led to increased usage of diagnostic and professional time at no little cost.

As long as the liability climate remains as it is, this problem will be most difficult to address and will continue to add to increasing health care cost.

7. *Insurance Eligibility and Benefits*—Ways at overall better and more economic utilization of benefits could result in measurable cost containment. Coverage of cost saving payments such as service done as an outpatient and acceptability by hospitals of preadmission diagnostic work done in physician's offices or other x-ray and laboratory facilities could avoid duplication of studies and costs.

Judicious and proper use of health care benefits in a cooperative way by both patient and provider can help hold down cost. The closer everyone watches health care dollars, the less increase one (or his employer) may have to pay for coverage. In this day of incentive, study of reward for such judicious use of benefits by the recipient might be of merit just as incentive to providers to hold down cost is being considered.

8. *Governmental Programs*—Rewriting of the statues to cut back on services, set limitations on expenditures, refine and reduce costly regulatory requirements and reporting, elimination of inconsistant effects on the providers, and provision of some fair co-payment or scaled responsibility mechanism to apply some degree of consumer restraint should receive early priority.

Something is out of kilter in our Alabama society when we see in the Medicaid program that 43% of the $185 million dollar budget is spent on nursing home care and that 80% of our nursing home beds are occupied by Medicaid patients whose entire total make up but 10% of the state's population. One can't help but suspect that availability without consumer restraint must be a factor in the imbalance.

While discussing governmental programs, we might suggest that federal hospitals also be involved in cost containment measures and approaches in the areas that other public and private hospitals are addressing and being addressed. An exchange of information, ideas, and methodologies might well be fruitful.

9. *Alternative Means of Health Care Delivery*—Alternative ways of delivering health care should be studied, yet approached with care. New ways should have avenues for trial, but we must guard against interference with basic quality. Economic and medical impact evaluation should be done before enactment of new programs, just as new, or changes in, regulatory requirements should have the same evaluation.

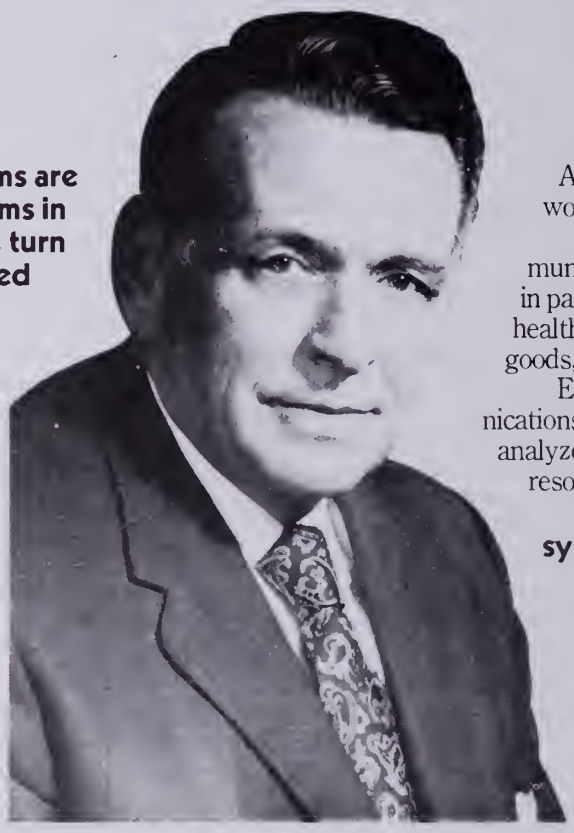
10. *Institutional Measures*—Reduction in operating and construction costs through improvement of facility design, construction practices, ongoing evaluation of staffing needs, assessment of employee productivity, procedures, and routines have and can measurably and favorably affect cost.

11. *Prospective Reimbursement*—This has been proposed as one method of cost containment. Because of complex problems in forecasting costs in which hospitals have no control, across the board implementation of this measure would present much difficulty in implementing. Certainly, institutions should not object to continuation of experimental projects involving prospective incentive reimbursement methodologies until determination can be made of the fairness and value of them.

Conclusion—In summary, we have looked at the problem of health care cost, at problems and trends affecting the escalation of these costs, and some of the ways in which we can address the problem. Yet, in reality, the real crux of the matter of cost will ultimately depend upon the needs, expectations, and demands of the public and how far the individual, employer, and government will go in paying for each of these.

Dr. Hamrick is Medical Director of Lloyd Noland Hospital, Fairfield, and Chairman of the State Board of Censors.

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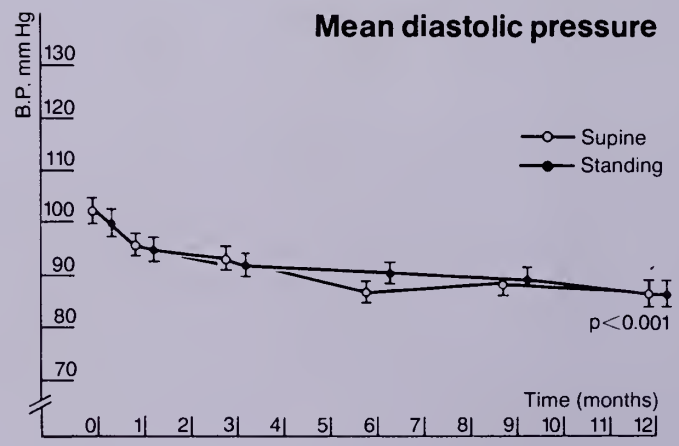
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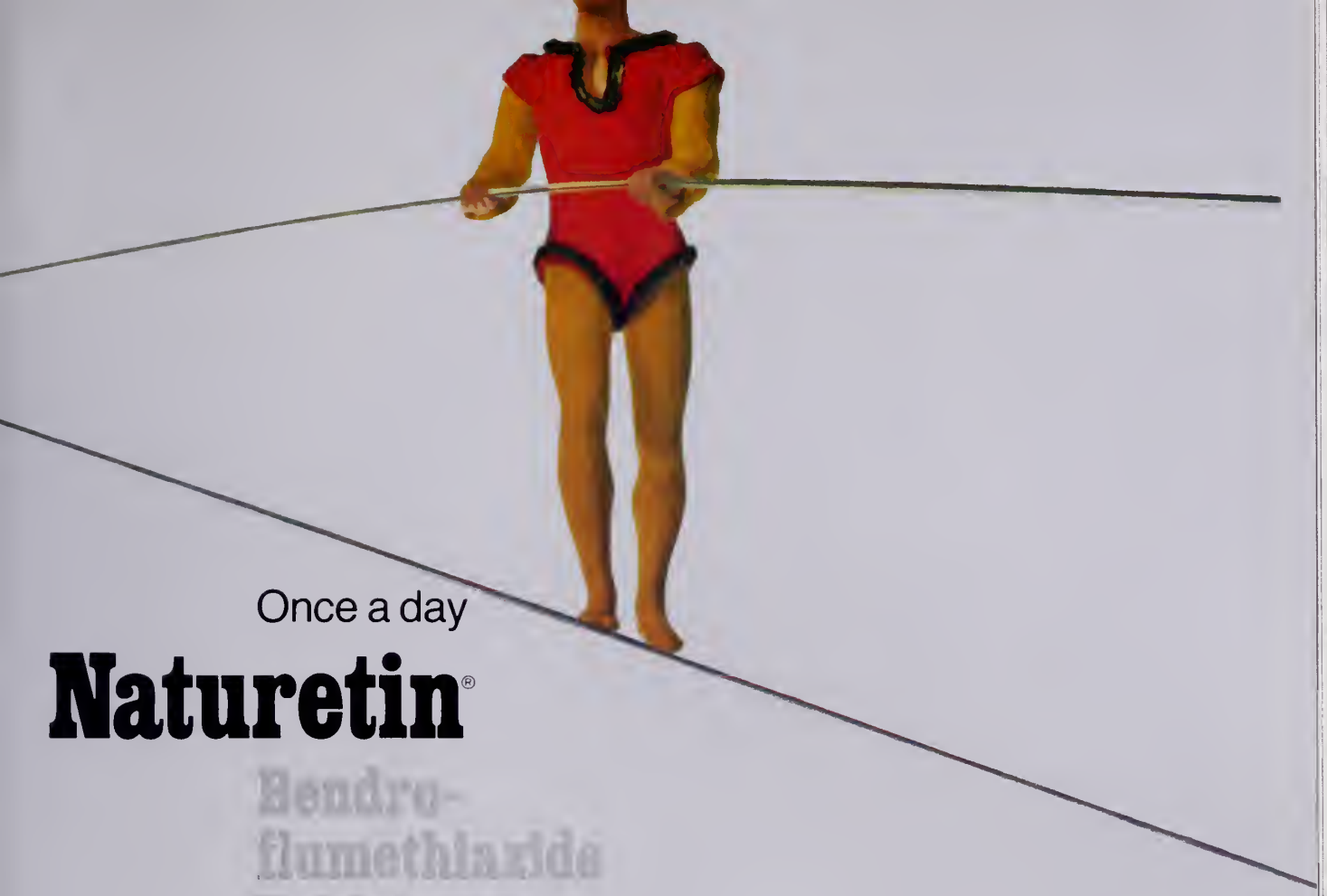
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"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762,1975.



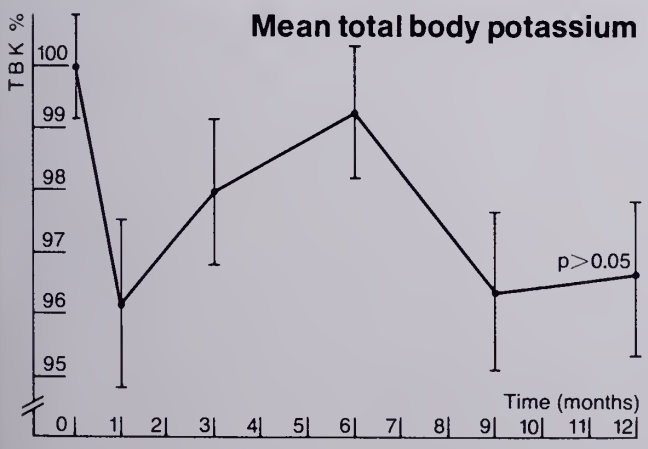
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets B.P.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5 mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0 mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day Naturetin® Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION
Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS
The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS
Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS
Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS
Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS
Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS
Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION
Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE
Store at room temperature; avoid excessive heat.

HOW SUPPLIED
2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

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THE LATEST TECHNIQUES OF PRACTICE MANAGEMENT

By Gerald Farley, Asst. Director
Department of Practice Management
Division of Medical Practice
American Medical Association

INVOLUNTARY PRACTICE CLOSING

"How to Start to Stop" dwelt on aspects involved in "winding down" a medical practice with retirement as the ultimate goal. But what happens when the doctor dies—suddenly, through illness or an accident?

Generally the spouse has to assume the brunt of dismantling and closing the medical practice. Many of the tasks have to be done when the wife or husband is under great emotional strain and there is a lack of time for making sound decisions.

However, advance planning can alleviate this situation. Planning for an emergency that may never happen is no more gruesome than purchasing life or accident insurance. And there is no cost for most of the things you can do that can be of real help to your spouse if a tragic situation does occur. Planning in advance will give you assurance that matters will be attended to in the way you prefer.

The first and easiest—but most important—is to prepare a list of "know abouts." These are the simple things that the surviving spouse should know. (You will find a list with this article.) Some are so obvious as to not seem worth writing down—but many physicians have not provided this simple help for their spouses.

For example, recently when a doctor died nobody could find the will. The wife knew that her husband had prepared a will. The lawyer thought the doctor had filed it at his office. The medical assistants at the office thought the doctor had taken it home. And the wife thought her husband had left it in the possession of the attorney. Eventually it was found, but for about ten days the wife, with all of her other problems, was faced with the uncertainty of how the estate would be settled.

In another instance the doctor had a small strong box in his office-den at home. His wife knew about it and knew that he kept insurance policies and similar valuable papers in it. What she didn't know was the combination. Not that this was any secret, he had simply never thought to tell her where it was written down. It was a steel box, about a foot and a half square, with double walls about an inch thick for fire protection. When the doctor died suddenly, his wife knew where to look for some of the papers she needed—but didn't know how to get into the box.

One of her boys wanted to take a sledge hammer and knock the combination off and then try to pry it open with a crowbar. Another suggestion was having a welder come and cut it open with an acetylene torch. A professional locksmith finally got it open for her, but it was an experience she could have done without.

Of course your spouse knows where you keep the key to your safe deposit box — or does she? We know of an instance where the wife of the doctor knew he had a lockbox. He kept a few things in it for her along with other valuable papers. He just forgot to tell her where he kept the key. At his death, arrangements finally had to be made with the bank to drill it open.

Any advance planning assumes an up-to-date will. This is a must. It should be reviewed every few years to provide for changes in your family, your financial situation, and for any geographical changes you might have made—moving from one state to another.

It is not macabre for a husband and wife to talk about funeral arrangements. It is probably not a subject that you would care to dwell on, but the purchase of a cemetary plot, simply as a business transaction, is a lot easier and better than for a surviving spouse to have to secure one in an emergency situation. If one or the other has some very definite ideas about burial, cremation, or providing body parts for transplant or medical research, the wishes of each should be written down and filed with the will. (Four items are listed under the attachment headed "SUDDEN DEATH.")

Some things should be done quickly at the sudden death of a physician. Collection action on outstanding accounts receivable should be started at once. Any delay in collecting these accounts will radically reduce their value. Arrangements have to be made to pay the office bills, to check on taxes owed, to discontinue services of employees and to find out about the office lease or rental contract. Patients have to be notified, arrangements made for disposition of medical records and many of the other things that are included in the orderly preparation of a voluntary practice closing.

A medical practice may of course be (1) abandoned, (2) given away, or (3) sold. There is nothing wrong with any of the three approaches, but the third choice would seem preferable. This assumes a solo practice rather than an ongoing partnership or corporation. With either a partnership or multi-doctor corporation arrangements for both voluntary and involuntary withdrawal from practice is (or should be) a part of the partnership or corporation regulations.

Selling a practice outright is much more difficult. A future article will be devoted to this subject.

KNOW ABOUT

1. Know location of last executed will, trust agreements, codicils, etc.
2. Know location of lockbox keys and any safe combinations.
3. Know location of personal and business bank accounts, savings accounts and checking account bank ID numbers.
4. Know location of birth certificates, marriage certificate, citizenship papers (if applicable), military discharge papers, adoption papers, veterans administration claim number and social security number.
5. Know name, address and telephone number of attorney, medical management consultant, accountant,

CONTINUED ON PAGE 26



By JAMES H. SULLIVAN, M.D.*

I would like to present a few facts, a few questions, and a few answers regarding the possibility of National Health Insurance for America. The facts are correct. We must disseminate this information to educate our citizens and forewarn them of this bureaucratic nightmare.

The tragic flaw in any federal, social, or health program is the bureaucracy formed which contols it. This usually comprises 20-50% of the total expenditure of these funds.

Social welfare spending hit an all-time high in 1976. The Department of HEW says that during 1976 social welfare programs cost the nation's taxpayers $331 billion ($45 billion more than it cost the same taxpayers in fiscal 1975).

Social welfare programs in 1976 cost each American citizen, man woman and child, $1,760.19. In 1960 only 26% of the federal budget was spent on social welfare programs, but in 1976, 56% of the federal budget was spent on social welfare programs.

A very interesting statistic is that 6.6% of the income of the nation's families went toward total health care cost in the United States which totaled $140 billion in 1976. This includes insurance, medicine, medical bills, hospital bills, glasses, dentures, etc. The taxes paid to the United States, State and local governments took 34% of the income of families of this United States.

The Polls Show

Why do we have rising health care cost? No longer can Washington accuse us doctors of being some 50,000 short in numbers. Washington cannot refute the peerless excellence of American medicine as compared to world-wide medicine. Washington cannot deny what the polls show, and that is that most Americans are satisfied with the quality and of the availability of their care.

Rising costs are being exploited as an excuse for an all-out move against the private practice of medicine and health care. We doctors are concerned about the cost issue, but contrary to the thinking of most politicians, we are not the culprit. The climb in cost is largely due to impersonal factors that far exceed the personal ability of any health care provider to control them. They are:

1. Growth and expansion of clinical competence and technology; 2. growth of health insurance and its incentives to better care; 3. the relentless surge in professional liability premiums; 4. greater longevity and thus a greater incidence of chronic illness (in other words, you cure one disease, the patient lives longer and is certain to get a second disease process); 5. steady inflation; and 6. most important, the network of administration and procedural expenses engendered by federal involvement in health care.

Five Times The Auto Industry

Did you know that hospitals employ five times as many people as the automobile industry? (2 million people work in hospitals.) Did you know what the impact of an increase in the minimum wage on hospital cost is? Raising the minimum wage in areas such as housekeeping, laundry, and kitchen also causes a ripple "effect" which raises salaries of other personnel to maintain a rational wage structure.

A 30 cents per hour increase in 1974 of the minimum wage initially had an impact of $29 million on hospital wages, but the ripple effect had an impact of $450 million. Did you know that each hospital patient in the United States in 1976 paid an average of $6 per day to cover malpractice insurance costs for the hospital? Did you know that one in three hospital employees have special training as opposed to 1 in 7 people in industry?

When socialized medicine and national health insurance fails, as has happened in England and other countries, the blame will not fall on the government; it will fall on the physicians, hospitals, nursing homes, and pharmacists. National health insurance will bankrupt this nation just as surely as it has England. The private practice of medicine, like the private enterprise American system, is based on the principle that a person is entitled to what he earns and pays for.

Awful Record

The record of HMO, or Health Maintenance Organizations, in the United States is simply awful. Co-op health groups traditionally have administrative costs amounting from 50-97% of the total money available. National Health Insurance and HMO group medicine invite assembly line medicine. Liberal congressmen and politicians have ignored the overall rise in cost of living and basic cost of inflation which in essence is uncontrolled deficit spending by government itself.

The annual budget of HEW (which is a bureau determined to cut costs and transform American medical health care) is greater than the total cost of all health care in this nation today. If honest cost savings were the real issue, the greatest boon to the American citizen today would be the abolition not of the practice of private medicine, but rather the Department of HEW.

Let's think of catastrophic illness and insurance. Catastophic illness insurance is thought necessary by many but when the facts are known it is a typical bureaucratic sham. A $10,000 bill for the patient in the hospital is extremely rare. Three out of 1,000 patients have expenses over $1,000 and 80% of these are either Medicare or psychiatric patients.

A family of four in the 25-35 age bracket would pay $52 a year to a private insurance company for a $10,000 deductible catastrophic insurance policy. Studies by private insurance companies as well as by a government appointed study committee reveal that catastrophic national health insurance the first year would cost $370 for the same family of four in this 25-35 age group. Where is the extra $318 per year to go? To bureaucratic boondoggling.

If smarter brains could prevail, the cost of a citizen's health insurance could be a direct tax credit against the federal income tax so that a taxpayer could deduct the entire cost from his tax bill. This would certainly be superior to the half-hearted deduction that now exists.

Over-Utilization

Any open-ended program such as national health insurance will encourage unnecessary utilization of benefits. If our medical system is indeed approaching a crisis due to rising costs, it is not because of the lack of government planning or intervention but rather because of the sheer weight of all government programs, regulations and paper work they entail.

A government that cannot even run a medical program for the poor and aged, or deliver the mail on time at a reasonable cost, can hardly call itself qualified to administer a national health insurance program. Of all the proposals for national health insurance, the overwhelming idea is to try to provide cost containment, but never once is mentioned the quality of medical care.

Our medical records can always be surveyed by the prying eyes of bureaucrats. The national health insurance PSRO standards will expose even your most private records to anyone in government. On a computer with your one big number will be your health record, any legal problems, income tax returns, bank accounts, parking tickets, court decisions, credit cards, financial statements, misdemeanors, licenses, and down the line.

Look At Britain

The arrival of Mr. Carter at the White House with his ideas of national health insurance makes it more than ever necessary for Americans to see what can be learned from Britain's example for national health insurance.

In seven years the number of administrative employees of the British health service increased almost twice, from 780,000 to 1.3 million non-medical administrative employees.

British doctors say bluntly that their British National Health Service is on the brink of collapse. The British patient can see nothing very wrong, even though he has to wait a long time at a clinic and up to a year or more for non-urgent hernia operations.

The reason for this is that the British people have never known anything else. They are accustomed to second class standards of medical service because it took 30 years for the superb medical care of Britain to demise. The truck with defective brakes and steering is no less headed for disaster in the early stages of its run down hill than when is crashes through the brick wall at the bottom. But the truck was actually doomed from the start unless someone had managed to deflect it.

Even though Carter advocates national health insurance, Senator Kennedy is intent upon the passage of a bill that bears his name. Senator Kennedy has said that if anything else is passed for national health insurance other than his own health security plan, this country will wither and die. Senator Kennedy will not let a Georgia peanut broker take over his medical field.

Financial Nightmare

The financing for national health insurance will amount to a political and financial nightmare. It is anticipated by the same actuary firm which studied catastrophic insurance programs that over $130 billion in start-up funds would be

NIGHTMARE

needed for the first year of a comprehensive national health insurance.

HEW recently released the list of physicians who in 1975 received large sums of money. Of the first 112 doctors checked, only 32 were correct as listed. One physician had retired 12 years previously and was listed as receiving $233,000.

Another physician who had died in 1974, one year before the time period, was listed as receiving $250,000. The list of physicians released by HEW has got to be one of the sloppiest performances in the history of American bureaucracy.

If the AMA were to put out data this inaccurate, the press would have us for breakfast, and properly so. For this reason HEW ought to be held similarly accountable.

Educate The Public

What can we do? First, education. We can inform the public by spreading the flaws of the cost and the bureaucratic nightmare of national health propoals. 2. We can encourage congress to repeal the PSRO and HSA laws and other social legislation programs and try to keep a right to privacy in our record keeping system. 3. We can court the press. It is so easy to be against something, but it is very difficult to stand up for something such as private enterprise, the private practice of medicine, the right to work, the right for freedom, and the right to be an American citizen. ●

*1430 3rd Ave., Columbus, Ga. 31901. (404) 322-1207.

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CONTINUED FROM PAGE 23

insurance agent, stock broker and real estate agent with whom business has been transacted.

6. Know location of titles and mortage of home and any other applicable real estate contracts, leases, or rental agreements.
7. Know location of all insurance policies and numbers.
8. Know location of stock and bond securities with cost information, including pension program information.
9. List credit card names, numbers and addresses.
10. List associations, specialty societies and professional, fraternal and social organizations in which membership is maintained.
11. Location of unpaid personal bills and other outstanding obligations.

SUDDEN DEATH OF THE DOCTOR

1. Notify office manager or receptionist and answering service with information to provide callers.
2. Notify attorney, medical management consultant or accountant who has been serving the practice.
3. Notify funeral director and clergy.
4. Have the location of the cemetary lot, plot number and deed available when talking with the funeral director. In case of cremation, the disposition of ashes.

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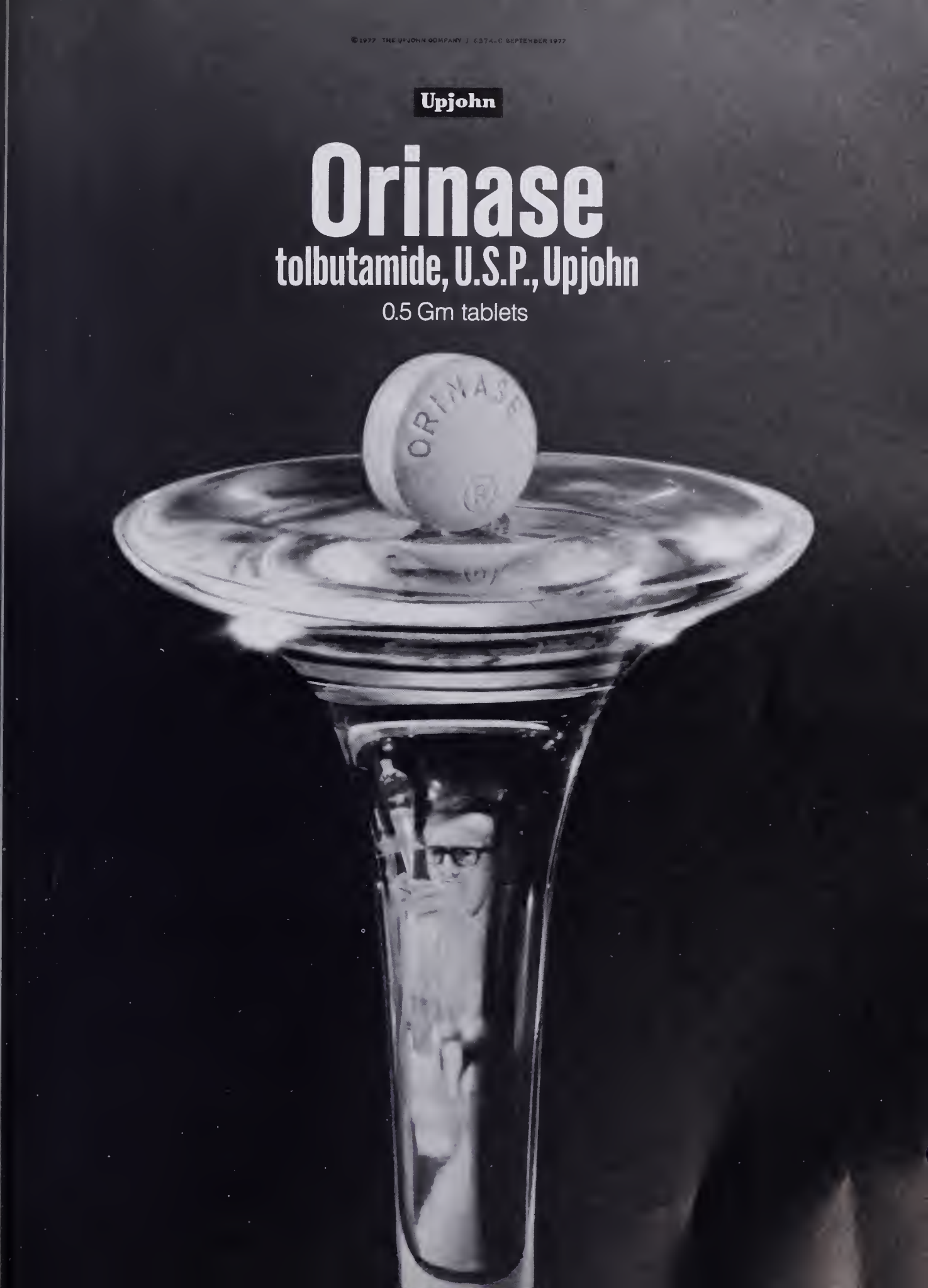
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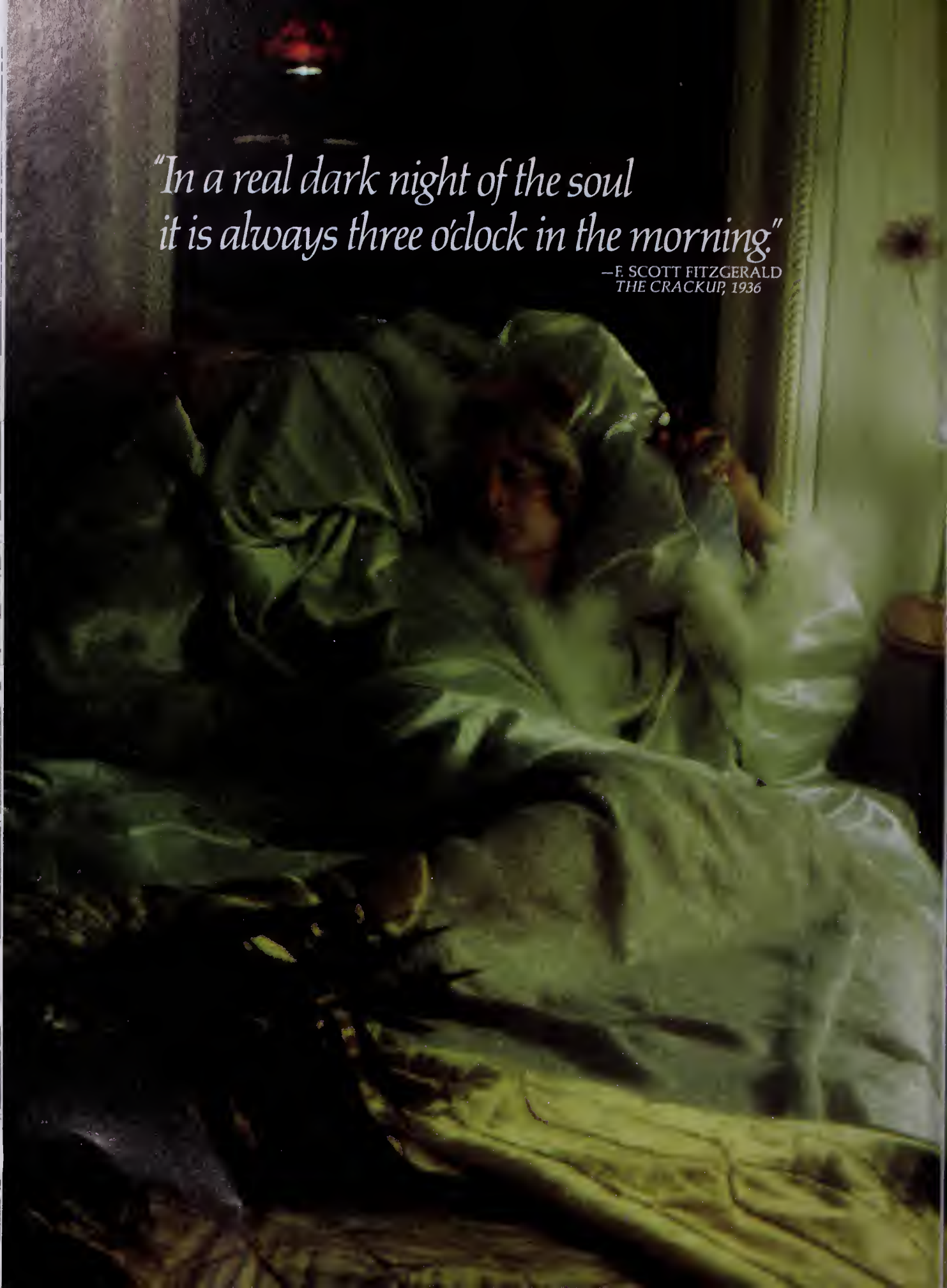
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THE CRACKUP, 1936

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1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

How Supplied—Each capsule contains doxepin, as the hydrochloride: 10 mg, 25 mg and 50 mg capsules in bottles of 100 and 1000.

For complete prescribing information please see package insert or PDR.



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Encephalitis Breakthrough At UAB

By WILLIAM H. McDONALD, Assistant Editor, The Journal

The medical world was duly impressed in early August when Richard J. Whitley, M.D., and Charles A. Alford, M.D., of the University of Alabama in Birmingham published the results of their controlled trials of a new drug in the treatment of herpes simplex encephalitis.

The article was published in *The New England Journal of Medicine* Aug. 11.

Simultaneously, the National Institute of Allergy & Infectious Diseases (NIAID, under the National Institutes of Health), which had funded the five-year study, along with the Robert E. Meyer Foundation of Birmingham, called a press conference in Washington to announce the dramatic breakthrough in man's continuing battle against disease.

Although 22 institutions across the country were involved in the study of adenine arabinoside therapy, the primary work and virtually all of the statistical and experimental control were at UAB.

Inevitably, what Drs. Whitley, Alford et al had accomplished was distorted by the lay press. In simplest terms, the collaborative study group achieved the first effective systemic treatment of a life-threatening viral disease. Previously, there was no way to counter this highly fatal brain infection that strikes several thousand Americans a year.

Talking Instead Of Listening

But the national and even international press would not leave the Whitley-Alford assessment of the accomplishment in the cautious, scientific terms in which they had couched their work.

In an interview with the *Journal* of MASA, Dr. Alford, 49, senior researcher in the UAB's share of the work, said:

"Writers (in Washington) began to talk to each other instead of listening." (Listening to what was said at the Institute's briefing Aug. 10. Even *The New York Times,* generally cautious in its treatment of scientific advances, had some glaring errors in its otherwise good reporting of the herpes simplex encephalitis work.)

Stories were carried nationally in newspapers, news magazines and by press and radio. TV trumpeted the story. The news quickly spread abroad and the account became warped out of all proportion to the achievement, as significant as it was.

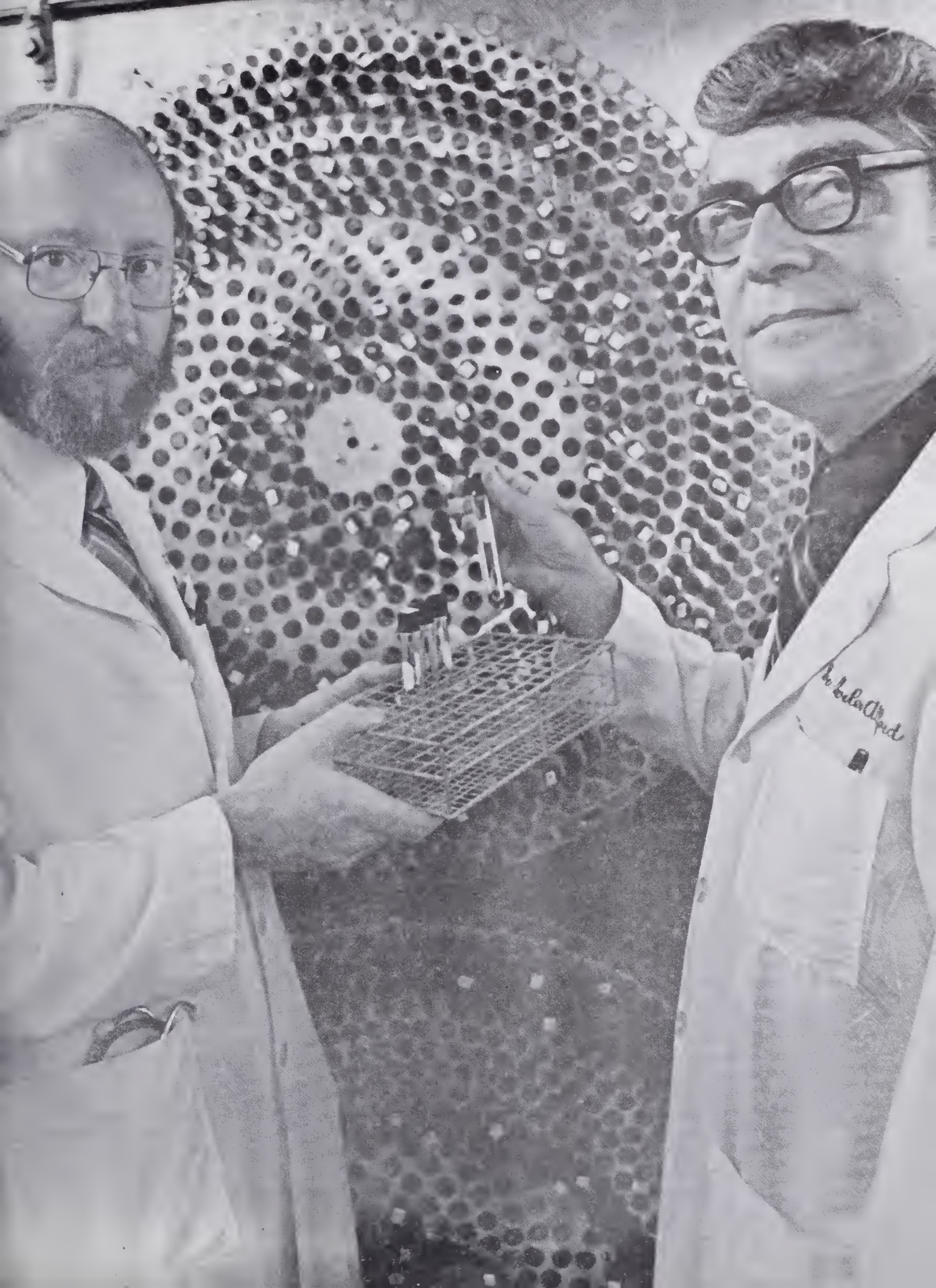
Some reports had Drs. Alford and Whitley curing everything from muscular dystrophy to the common cold, including cancer. As if by unanimous agreement, the experimental drug (ara-A, for short) which had in fact "cured" the most common form of sporadic fatal encephalitis in this country, became the viral equivalent of penicillin.

Direct quotes, attributed to Dr. Alford, appeared across the country, claiming just that. They were, of course, wrong.

The crowded offices of the two doctors in Birmingham have been besieged with calls from far and near, to

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Drs. Richard J. Whitley (L) and Charles A. Alford of UAB, principal researchers in the historic controlled trial of adenine arabinoside in the first effective treatment of herpes simplex encephalitis, inside a walk-in incubator in their Birmingham lab. The rotator behind them holds cell cultures.



LETTER TO ALABAMA PHYSICIANS

Richard J. Whitley, M.D., Assistant Professor of Pediatrics at UAB and principal author of the newly published work on treatment of herpes simplex encephalitis, is interested in informing Alabama physicians of the ongoing viral studies at UAB:

To The Journal:

I want to provide in greater detail the patient populations that we are interested in studying and why. I have divided the patient populations according to the following categories:

(1) Varicella zoster virus infections. We are anxious to study any immunocompromised patient (individuals with diagnoses of cancer or receiving steroid therapy for other diseases) who have varicella zoster virus infections. We are particularly interested in those with disease less than 72 hours so that we can study them in a blind, controlled study to determine the clinical usefulness of adenine arabinoside for the targeted patient population.

However, individuals with disease greater than 72 hours in duration are also needed for the study of the new compound adenine arabinoside monophosphate, which we believe will replace adenine arabinoside because of its increased solubility. The one offer of enticement which we are able to provide patients in this category is free hospitalization on our Clinical Research Unit.

(2) Neonatal herpes. We request that all physicians in the state be atuned to newborns who potentially have a neonatal herpes infection. This would be especially suspect in children with eye and skin vesicles delivered to women having a history of vaginal herpes.

(3) Progressive mucocutaneous herpes simplex infections. Under this category we are desirous of studying patients having an underlying disease which requires immunosuppressive therapy (cancer or necessitating steroid therapy) and with demonstrably cutaneous herpes. These individuals would be hospitalized on our Clinical Research Unit, where hospital expenses would be borne by that group.

(4) The herpes simplex encephalitis has already resulted in increased physician awareness resulting in the transfer of patients with presumed herpes encephalitis to the University of Alabama in Birmingham. We have had a great deal of success in evaluating these patients through a team of physicians, including Dr. Glenn Cobbs and his unit in the Department of Medicine, Division of Infectious Diseases, and the neurosurgery division, as aided and assisted by Dr. Richard Morowitz.

As can be seen from the studies listed above, it is mandatory that patients be immunocomprised for disease states listed under numbers (1) and (3). We are unable to accept normal hosts into these studies because of the potential of long-term toxicity of the drug.

In contrast, studies (2) and (4) do allow for the study of normal hosts simply because the disease has a great potential for lethality.

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the point where both have become gun-shy.

On a recent day in their labs on Seventh Avenue, they debated whether or not to see the representative of a German magazine, who was cooling his heels in the outer office.

"I just don't know," Dr. Alford said to Dr. Whitley. "What do you suppose they are going to write about it? I don't think we should talk to him."

Their debate continued as they were standing in a walk-in incubator, where cell cultures were stored. Dr. Alford explained that he had begun fearing the telephone because each new cell brought in an inquiry as to just what he, Dr. Whitley and the other members of the collaborative group had "cured."

Continuing the discussion in his cramped, austere office off one of the laboratories in the CDLD building in the medical complex, Dr. Alford cautioned:

"We have one drug, one conception.

"It would be a clinical breakthrough if we could put ara-A in the hands of the physician. We haven't done that. It may be years—perhaps never—before the FDA approves the drug for other than experimental use on a life-threatening infection.

"But we have a scientific model to work with. We don't know where it will lead."

Too Modest

Dr. Alford's caution, against the background of inflated news accounts of what had been achieved, was understandable. But, in another sense, he was being overly modest.

The double-blind, controlled trials had begun slowly enough in 1972, gathering some momentum (and increases in members of the collaborative study group) in 1973 and in 1974.

But it was not until the Spring of 1976 that Drs. Whitley and Alford were convinced that they had something significant. In April of that year, they wondered whether the controls should be terminated because ara-A was obviously saving lives.

Since it was, at this juncture, a double-blind trial, the question might have been: How did they really know they had something, since the code had not been broken and they did not know which patients were receiving ara-A and which the placebo?

Dr. Whitley answered this: A number of patients were dying early in the course of the disease, while others were surviving in a pattern that overwhelmingly suggested a factor other than the disease was in command.

They had been enjoined, under the protocols of the trial program, to monitor for toxicity. Earlier experiments with another seemingly promising anti-viral drug, Idoxuridine, had been terminated when the drug demonstrated (quoting Dr. Whitley's article) "clearcut toxicity without efficacy."

To determine whether those that died in the ara-A trials might have succumbed to the drug rather than the disease, it was necessary to break the code on all fatal cases.

This was done by NIAID. The finding was that all the patients who died had received the placebo. The broken code revealed none who died after taking the drug.

Almost Too Efficacious

Naturally, this reinforced the conviction of Drs. Alford and Whitley that the double-blind study probably should be ended for ethical reasons. Ara-A, in short, was working.

This was plainly true even though the results of the trial were not then statistically validated. The drug was almost too successful—for experimental purposes, that is.

(When the results were finally analyzed, they showed that ara-A had reduced mortality from an expected 70 per cent to 28 per cent, with some apparently salutary effect on morbidity, although Dr. Whitley is extremely cautious about this aspect in his article.)

In May 1976, the two UAB scientists went to see Dr. David Alling, special assistant for biometry, National Institute for Allergy & Infectious Diseases.

Dr. Alling, as Dr. Whitley explained it, wore two hats. First, he was the chief statistician of the program. Second, he had the parallel function of comsumer advocate. In the latter capacity, it was his duty to terminate if it was shown to be continuing in the presence of manifest efficacy.

This, as it happened, was also one of the overriding functions of the Human Use Committee at UAB. That committee would have stepped in had the research gone beyond humanitarian limits.

Similar peer review committees were in being at all the other 21 institutions participating in the study; yet the ethical dilemma, in these circumstances, had to devolve on Dr. Alling in Washington.

Dr. Whitley:

"We made the decision that we needed someone to go over the data to make sure that we didn't have a level of significance that would mandate against continuing a controlled study. And that was Dr. Alling."

Dr. Alling's Decision

Dr. Alling pondered the data and decided that six more patients were needed, that the controlled study would be ended after this last enrollment, probably in July. Then, not before, the code would be broken. As it turned out, eight patients were enrolled in that period, bringing the total of those accepted for the study to 28, the number reported on in Dr. Whitley's article.

Since Aug. 5, 1976, no patient has received a placebo. The results were analyzed and presented at an internal review meeting last October. After that, it was necessary to "go back and clean our data to make sure we were absolutely correct with the interpretation we had," in Dr. Whitley's words.

"Our original findings showed that the drug decreased mortality and it looked like the survivors of the drug-treated group did better than the placebo patients, although that is difficult to say because we don't have enough survivors at this point in time to judge the true morbidity."

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ARA-A's ORIGINS

There is a dispute of sorts over the origin of adenine arabinoside, the compound known as ara-A. Most of the press said that it had been isolated from a Carribean sponge by French scientists in the early 1960s.

Neither Dr. Alford nor Dr. Whitley disputes that, although they have sought to play this down in the hope, apparently, of demysticizing the substance.

Parke, Davis & Company, which supplied ara-A for the research, traces the origin of the compound to the isolation of a pure culture from a soil sample collected near Bosco Trecase, Naples Province, Campania, Italy, on May 18, 1962. Both are right, Drs. Alford and Whitley agree. Ara-A comes from each of these sources. However, they think the French work on the sponges deserves equal billing even though the findings were never formally published.

Before concentrating on ara-A, scientists had been looking at perhaps 300 compounds, at least some of which were produced in the 1950s and 60s by microbiologists who studied seaweed, sponges, soil, etc., in their search for useful compounds.

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Adenine Arabinoside Therapy Of Biopsy-Proved Herpes Simplex Encephalitis

National Institute of Allergy and Infectious Diseases Collaborative Antiviral Study

Richard J. Whitley, M.D., Seng-Jaw Soong, Ph.D., Raphael Dolin, M.D., George J. Galasso, Ph.D., Lawrence T. Ch'ien, M.D., Charles A. Alford, M.D., and the Collaborative Study Group

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Abstract We evaluated adenine arabinoside (vidarabine) for treatment of herpes simplex encephalitis in a placebo-controlled study. In 28 cases proved by isolation of Type 1 virus from brain biopsy, treatment reduced mortality from 70 to 28 per cent (P=0.03), and over 50 per cent of treated survivors had no or only moderately debilitating neurologic sequelae. This improvement was achieved without evidence of acute drug toxicity. Thus, adenine arabinoside has a good therapeutic index (efficacy/toxicity) for the treatment of Type 1 herpes simplex encephalitis. However, the drug must be given early in the course of infection before the advent of coma to have a beneficial effect. Moreover, it should be coupled with brain biopsy for specific diagnosis to avoid unnecessary treatment of nonresponsive encephalitides that can mimic herpes simplex. (N Engl J Med 297:289-294, 1977)

Encephalitis due to herpes simplex virus is considered the most common cause of sporadic fatal encephalitis in this country.[1,2] Both the high mortality and the attendant morbidity in the few survivors[3-5] have prompted attempts at therapy with experimental compounds. These included the pyrimidine nucleoside analogs, 5-iodo-2'-deoxyuridine (IDU, idoxuridine) and 1-β-D-arabinofuranosyl cytosine (ara-C, cytosine arabinoside), which inhibit cellular as well as viral DNA replication in vitro.[6-8] Because of the clinical need and despite a paucity of animal model studies, these two agents were used in uncontrolled trials with reports of benefit.[9-15] Indoxuridine appeared to be gaining acceptance until controlled studies demonstrated clear-cut toxicity without efficacy.[16]

In late 1972, collaborative controlled trials of adenine arabinoside, the purine nucleoside, 9-β-D-arabinofuranosyl adenine (ara-A, vidarabine), were undertaken for experimental therapy of several different severe herpetic infections of man, including this study of herpes simplex encephalitis. Previous reports have described the properties of the drug,[17-20] as well as its pharmacology,[21-23] and encouraging results obtained from uncontrolled trials.[24-27] Recent controlled studies indicate that it is effective for systemic therapy of herpes zoster infections in immunocompromised persons.[28,29] In the study described below adenine arabinoside offered successful systemic therapy of herpes simplex encephalitis in man. Mortality was clearly improved, and morbidity was dependent upon the level of consciousness at the time therapy was begun.

METHODS

Study Population

Criteria for enrollment into the study included clinical features indicative of herpes simplex encephalitis—i.e., evidence of an acute febrile encephalopathy with disordered mentation, focal cerebral signs, localization by diagnostic procedures (electroencephalogram, arteriogram or brain scan singly or in combination) and cerebrospinal-fluid findings compatible with viral infection. Brain biopsy of the focal area of involvement was mandatory before admission. For the purpose of this presentation, herpes simplex encephalities was considered proved when virus was isolated from brain tissue (biopsy-positive group). Etiologic studies on those from whom virus was not recovered from the brain (biopsy-negative group) are still in progress.

Study Design

After informed consent from the patient or nearest relative, a brain-biopsy specimen was obtained, and drug or placebo was given in a double-blind placebo-controlled, randomized fashion. Adenine arabinoside and placebo were administered intravenously at a dosage of 15 mg per kilogram per day over 12 hours in concentrations not exceeding 0.7 mg per milliliter of standard intravenous solution. Drug and placebo (vehicle) were kindly supplied by Parke, Davis and Company, Ann Arbor, Michigan.

This report is the summary of data compiled by the following investigators: G. Galasso and R. Dolin (project officers), M. Mattheis, National Institute of Allergy and Infectious Diseases, National Institutes of Health; R. Whitley, L. Ch'ien, C. Alford, Central Unit, and S. Soong, D. Hurst, Department of Biostatistics, University of Alabama in Birmingham; J. Overall, University of Utah College of Medicine, J. Gwaltney, University of Virginia; R. Hayes, M. Hilty, Ohio State University College of Medicine; C. Linnermann, A. Body, G. Schiff, University of Cincinnati; T. Merigan, Stanford University; C. Liu, D. Hinthorn, L. Baker, University of Kansas Medical Center, J. Luby, University of Texas, Southwestern; S. Schwartzmann, A. Visintine, A. Nahmias, Emory University; J. Connor, Y. Bryson, University of California, San Diego; M. Ho, C. Norden, University of Pittsburgh; M. Hirsch, A. Karchmer, Massachusetts General Hospital, Boston; J. Tiles, University of California, Irvine; A. Chow, Harbor General Hospital, University of California, Los Angeles; E. Kieff, T. Orellana, M. Gardner, University of Chicago; R. Buchanan, T. Petrick, Parke, Davis and Company, Ann Arbor, MI.

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From the departments of Pediatrics, Microbiology and Biostatistics, University of Alabama in Birmingham, and the National Institutes of Health, Bethesda, MD (address reprint requests to Dr. Whitley at the University of Alabama in Birmingham, P. O. Box 313, Rm. 609, CDLD Bldg., University Station, Birmingham, AL 35294).

Table 1 Summary of Mortality* Data in Patients Treated with Adenine Arabinoside (Ara-A) and Placebo

Biopsy	Ara-A			Placebo		
	Total studied	Dead	Mortality rate	Total studied	Dead	Mortality rate
Positive†	18	5	28	10	7	70
Negative	11	1	9	11	3	27
Totals	29			21		

*Mortality rates [illegible] of after onset of therapy by chi square analysis. Ara-A vs placebo biopsy positive P = 0.03. Ara-A vs placebo biopsy negative P = 0.27. biopsy negative vs biopsy positive placebo P = 0.05. biopsy positive Ara-A vs biopsy negative placebo P = 0.98. & biopsy positive placebo vs biopsy negative Ara-A P = 0.005.

†Biopsy positive if biopsy was negative at biopsy.

Biopsy-positive patients received drug or placebo for 10 days. Treatment was stopped after five days in the biopsy-negative group to avoid possible drug toxicity in situations in which adenine arabinoside was believed unwarranted. In both groups, clinical and laboratory monitoring proceeded to determine final outcome in relation to therapy and cause.

Clinical Observations

Original clinical assessments focused on the extent and progression of brain damage from onset of symptoms, with particular attention to state of consciousness, development of seizures and paralysis and signs related to increased intracranial pressure. Before biopsy, the area and degree of brain involvement were evaluated by electroencephalography, brain scan, computerized axial tomography or arteriography. Cerebrospinal or ventricular fluid was obtained for routine laboratory, virologic and immunologic assessments at the discretion of the attending neurologist. Because of increased intracranial pressure, sampling could not be performed at defined intervals.

Patients were monitored daily for progression of disease, and clinical observations recorded at five-day intervals for one month or until death. Follow-up examinations, performed at two, three, six, 12 and 24 months in concert with local neurologic evidence of resolution or deterioration of function.

Laboratory Observations

Brain tissue (biopsy and autopsy) was minced in standard cell culture mediums (as employed at each participating unit) and inoculated as a 10 per cent (wt/vol) homogenate into eight tubes of various types of cell cultures sensitive for isolation of herpes simplex virus. We employed standard virologic procedures for processing urine, throat swabs and occasionally white blood cells and stools. All cultures were observed for a minimum of four weeks before being discarded as negative. Herpes isolates were typed in the laboratory of A. Nahmias (Emory University, Atlanta, Georgia) with a membrane immunofluorescent procedure, as previously described.[30]

We performed toxicology monitoring on admission (pretreatment) and at serial five-day intervals for 25 days. These measures included, in addition to clinical assessments, the following: complete blood counts (quantitative assessments of reticulocytes, platelets, white blood cells, with differential counts, hemoglobin and hematocrit); serum glutamic oxalacetic transaminase; bilirubin; total protein; blood urea nitrogen; creatinine; lactic dehydrogenase; alkaline phosphatase; and routine urinalysis.

Data Management

Data from the case-reporting forms were collected, collated and prepared for computerization at the Central Unit, University of Alabama in Birmingham. Chi-square analyses were routinely employed in statistical assessments, with t-test or multivariant regression analyses applied as specifically indicated.

RESULTS

Mortality and Morbidity Data

Mortality data according to treatment and biopsy category are summarized in Table 1. Fifty-two patients completed the study; two were excluded from analysis in that they were not randomized. Of the remaining 50, 29 received adenine arabinoside, and 21 were given placebo. Of 28 patients who were brain-biopsy positive 18 received drug. Adenine arabinoside significantly reduced the mortality rate of proved herpes simplex encephalitis from 70 to 28 per cent (P=0.03). However, when the data were adjusted for increased severity, significance was further enhanced (P=0.0018, by multivariant regression analysis). The frequency of death in the biopsy-negative groups was not significantly altered (P=0.28). The mortality rates in biopsy-positive patients who received placebo were also significantly higher than those in biopsy-negative groups treated with either drug (P<0.0025) or placebo (P=0.05).

Since reduction in mortality resulting from adenine arabinoside treatment of herpes simplex encephalitis proved to be significant, these control studies had to be terminated for ethical reasons, even though the number of placebo-treated patients was small. Statistical assessment of the impact of treatment on morbidity was therefore impossible in that only three placebo-treated patients survived. Figure 1 summarizes morbidity in the two treatment groups with proved herpes simplex encephalitis. Morbidity was rated according to the following criteria. Patients who returned to home, school or work at their previous level of performance were judged to have no or minor complications. If patients were able to perform at gainful level even though hampered by varying degrees of neurologic deficits,

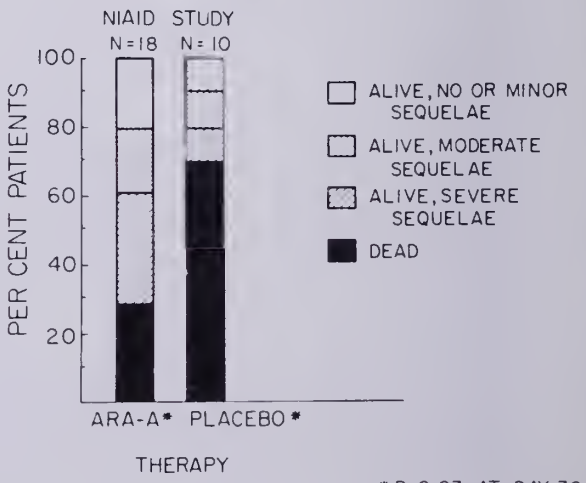


Figure 1. Morbidity and Mortality in Biopsy-Proved Herpes Simplex Encephalitis.

the sequelae were classified as moderate. Damage was considered severe when institutionalization or continuous home care was required. Morbidity in survivors of herpes simplex encephalitis treated with adenine arabinoside reflected outcome in the placebo-treated patients, within the context of the small numbers studied. The absolute number of patients with severe, moderate or minor sequelae appeared to be increased with drug therapy. Importantly, however, seven of the 18 drug recipients are now leading reasonably normal lives in contrast to two of 10 placebo-treated patients.

Sequelae, seen singly or in combination in the seven drug-treated and noninstitutionalized survivors with proved herpes simplex encephalitis followed for at least one year, included personality change, dysphasia, autonomic-nervous-system dysfunction (bowel or bladder incontinence), hemiparesis and seizures. All seven survivors had evidence of one of these residua one month after initiation of therapy. However, with time, improvement was observed. In four, resolution was complete. A fifth patient had only dysphasia and personality change considered to be minor impairments; the remaining two had personality changes coupled with bladder incontinence, with seizures in one and hemiparesis and dysphasia in the other.

The six severely afflicted survivors, three adults and three young children (less than four years of age), had exaggerated combinations of all the above findings. The adults died between four and six months after therapy; the children survived the first year without substantial resolution of neurologic defects.

Relation between Central-Nervous-System Status at Biopsy and Outcome of Herpes Simplex Encephalitis

Prognosis of proved herpes simplex encephalitis depended on two factors (multivariant regression analyses): treatment (P=0.0018), as noted previously, and level of consciousness at the time of therapy (P=0.0138). No other factors, such as the presence of paresis or seizures, were related statistically to outcome. Plotting relation between level of consciousness at the time of institution of therapy and outcome (Fig. 2) gave mortality rates of 0, 25 and 57 per cent for lethargic, semicomatose and comatose treated patients, respectively. Comparable figures in placebo-treated patients were 24, 100 and 100 per cent. Morbidity was improved, especially in the lethargic group and to a lesser extent with semicoma.

Although the level of consciousness at the time of biopsy was a determinant of outcome, the duration of disease before biopsy was not. The duration of altered consciousness, the symptom taken as the onset of disease, was nearly identical for groups who were lethargic, semicomatose and comatose at biopsy, with a mean of 4.7, 4.3 and 6.5 days, respectively, and ranges between two and 12. Progression of disease was therefore quite variable. One third of the patients remained lethargic from onset to biopsy, one third progressed from lethargy to semicoma, and one third progressed to coma, all over nearly identical intervals.

Comparability of Treatment Groups

There were no significant differences between patients with proved herpes encephalitis treated with adenine arabinoside and those treated with placebo in age, sex, concomitant bacterial infections and frequency of occurrence or therapy of cerebral edema. The duration and type

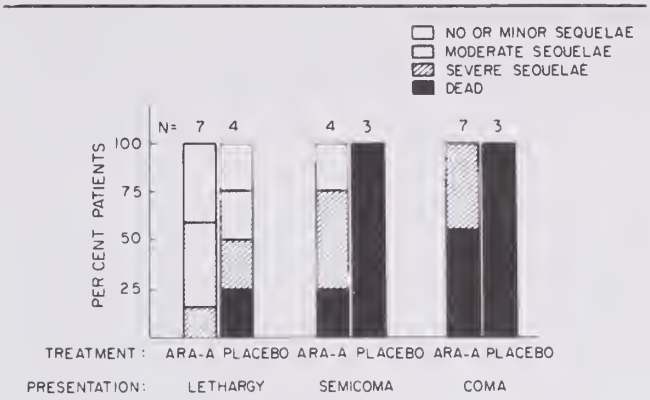


Figure 2. Relation between Outcome and State of Consciousness at Time of Initiation of Adenine Arabinoside (Ara-A) or Placebo Therapy in Biopsy-Proved Herpes Encephalitis.

of anesthesia, as well as the size of the biopsies, were comparable. There was no significant difference between the two groups for any historical findings or sign at presentation, as shown in Table 2, except for seizures, which occurred more frequently in drug recipients ($P<0.05$).

The mean duration of alteration of consciousness, seizures and personality change was also comparable between treatment groups. However, pleocytosis was present longer before biopsy in drug-treated recipients, 4.8 versus 3.0 days (P=0.018 by t-test). Otherwise, cerebrospinal fluid findings did not differ in any way according to either biopsy or treatment status.

With the same features as shown in Table 2, the groups of patients who were biopsy positive and negative had nearly identical presentations, except for personality change (P=0.005), dysphasia (P=0.046) and focal seizures (P=0.009), all of which occurred significantly more often among patients with proved herpes encephalitis.

Twenty-six of 28 patients with biopsy-proved disease had evidence of localization by arteriography, brain scan or electroencephalography, in contrast to 14 of 21 whose biopsies were negative. Localization by brain scan and focal electroencephalography was significantly more frequent in the group with positive brain biopsies ($P<0.0005$ and $P<0.0005$, respectively).

Unusual Findings with Herpes Simplex Encephalitis

Even with comparability between randomization groups, two unique features of herpes encephalitis were apparent. The first was a biphasic age distribution with over a third (10 of 28) of the cases occurring under the age of 19 and 64 per cent (18 of 28) over 40. Unexpectedly, five cases occurred in children between the ages of six months and nine years. In addition, a majority of cases of proved herpes encephalitis were diagnosed during the winter and spring (20 cases January through June, $P<0.02$).

Virologic Data

All the brain isolates were Type 1, herpes simplex. In spite of routine examinations herpes simplex was recovered from the oropharynx in only three patients (two with biopsy-positive and one with biopsy-negative disease), and from cerebrospinal fluid only once—in a child whose brain biopsy was positive. Neither herpes nor any other virus was recovered from urine, stool or white-cell samples.

Table 2. Comparison of Historical Findings and Signs at Presentation in Adenine Arabinoside (Ara-A) and Placebo Recipients with Proved Herpes Simplex Encephalitis.*

Characteristics	Treatment Group	
	Ara-A	Placebo
	no./total	
Historical findings:		
Altered consciousness	18/18 (100)†	9/10 (90)
Fever	18/18 (100)	9/10 (90)
Personality change	10/10 (100)	9/10 (90)
Headache	15/18 (83)	8/10 (80)
Vomiting	9/18 (50)	5/10 (50)
Recurrent herpes labialis	4/18 (22)	2/9 (22)
Memory loss	2/18 (11)	3/10 (30)
Photophobia	0/18 (0)	1/10 (10)
Signs at presentation:		
Disorientation	9/10 (90)	4/4 (100)
Dysphasia	8/10 (80)	6/6 (100)
Autonomic-nervous system dysfunction	14/18 (78)	7/10 (70)
Ataxia	4/6 (67)	4/6 (67)
Seizures:	13/18 (72)	3/10 (30)
Focal	10/18 (56)	2/10 (20)
Generalized	3/18 (17)	1/10 (10)
Hemiparesis	9/18 (50)	3/10 (30)
State of consciousness at biopsy:		
Lethargy	7/18 (38)	4/10 (40)
Semicoma	4/18 (22)	3/10 (30)
Coma	7/18 (38)	3/10 (30)

*P value comparing frequency of seizures between groups was <0.05. No other differences were significant. Denominator reflects total no. of patients with data recorded. †Figures in parentheses denote % of patients.

Drug Toxicity

Clinical. Adverse clinical reactions were not identified at the dosage employed. Nausea, a known adverse reaction, could not be satisfactorily monitored because of the disturbed state of consciousness.

Laboratory. Serious adverse effects of adenine arabinoside on bone marrow, liver and renal function were not observed. No significant changes in any measurement were attributable to drug therapy. Comparisons of mean values for hemoglobin and white-cell and platelet counts and serum levels of bilirubin and glutamic oxalacetic transaminase revealed no differences between groups receiving adenine arabinoside and those receiving placebo at any sampling interval.

We next sought laboratory alterations greater than 1 standard deviation of the mean that could possibly represent bone-marrow or liver dysfunction and occurring at any sampling time. Table 3 shows the ratios and percentages of patients treated and untreated, irrespective of biopsy results, in whom these alterations occurred. Abnormal changes, as defined here, were recorded more frequently in adenine arabinoside recipients, but not at statistically significant levels nor with clinical implications. The greatest frequency of change occurred for white-cell reductions among treated patients ($0.10 \geq P \geq 0.05$). Even so, no patient had absolute granulocytopenia, and only four had leukopenia (3950, 3900, 3200, 2500 white cells per cubic millimeter) that developed after therapy (days 15 to 25) and was reversible. Thrombocytopenia alone occurred in two other drug recipients (counts of 68,000 and 59,000) with no clinical evidence of bleeding. Although the frequency of elevated serum glutamic oxalacetic transaminase was no different between groups, drug recipients had mean values on the average of 70 IU greater than placebo recipients during therapy. These changes were reversible over the five days immediately after the treatment period. Clearly, at the doses employed, no clinically noteworthy acute toxicity could be ascribed to the use of adenine arabinoside irrespective of the cause of the encephalitis.

DISCUSSION

The natural course of herpes simplex encephalitis is malignant. Death supervenes in a majority of cases, 70 per cent in this study. Adenine arabinoside alters the course of infection in favor of survival (mortality significantly reduced to 28 per cent). Reduction in mortality can be achieved without clinically noteworthy drug toxicity. Thus, the therapeutic index (efficacy/toxicity) is apparently appropriate for treatment of herpes simplex encephalitis with dosages employed in this study. However, the total impact of this therapy on overall morbidity remains to be answered. Follow-up data on survivors of untreated herpes simplex encephalitis, including our placebo group, are too limited to define the spectrum of neurologic residua precisely. In this study the quality of life in treated survivors was at least as good as that in the untreated. If this observation holds true, both the number of patients who fully recover with treatment and those who are severely maimed will be increased, as will also the percentage with neurologic impairments intermediate between the extremes. In that the area, extent and progression of brain involvement are quite variable and hemorrhagic necrosis is a prominent feature of the pathology of herpes simplex encephalitis, and therapeutic modality that reduces mortality will undoubtedly leave a broad spectrum of neurologic defects in the survivors, unless viral replication is reduced or eliminated in the very earliest stage of infection.

Currently, the state of consciousness provides the best prognostic guide to outcome. Once the comatose state is reached therapy appears to be futile: 57 per cent of comatose patients died in spite of therapy, and all the survivors were severely debilitated. On the other hand, in the lethargic patients, there were no deaths, and six of the seven survivors had only minor or moderate neurologic complications. With semi-coma, outcome varies between these extremes and, because of of the inadequate number of observations, the result in terms of either mortality or morbidity is less predictable. Without treatment, however, all patients comatose or semicomatose at the time of brain biopsy died; indeed, 50 per cent of those who were lethargic either died or were left with severe defects. Decisions about initiation of therapy are urgent with suspect cases because brain damage may become irreversible within a few days. The comatose or semicomatose state was reached on an average of six days after onset of infection in two thirds of the placebo-treated patients in this study.

The need to start therapy early in the course of the infection focuses on the current diagnostic dilemma magnified by our findings. At present, diagnosis of herpes simplex encephalitis requires virologic examination of brain tissue and, of necessity, biopsy.[31] In 44 per cent of cases studied here, virus could not be recovered from the brain even though clinical and routine diagnostic studies (in all but six patients with negative biopsies) suggested herpes encephalitis—namely, progressive focal involvement. In the patients with negative biopsies mortality was not adversely affected by the doses of adenine arabinoside given. Since therapy

was limited to five days in this group the total amount of drug administered was less than that given in the cases with proved herpes simplex encephalitis. Whether total doses of the drug needed to alter the course of herpes simplex encephalitis satisfactorily would worsen the condition with clinically similar encephalitides is unknown. Surely, the drug is not helpful, and its administration poses problems of fluid overload, which is especially troublesome with increased intracranial pressure. With this knowledge and the known specificity of adenine arabinoside for herpesviruses, brain biopsy to establish diagnosis is necessary before initiation of therapy. To avoid delay, waiting for virologic confirmation after biopsy before treatment is begun is inadvisable. However, lacking proof of diagnosis, therapy should be terminated in five days, rather than delivery of a full 10-day course. Admittedly, a few patients with herpes simplex encephalitis may receive inadequate therapy by this approach since the biopsy may miss the focal area of involvement. Still, it remains the most sensible suggestion from the standpoint of safety for the individual patient with severe encephalitis of unknown cause.

To emphasize the diagnostic difficulties,[31] in patients with proved herpes encephalitis, peripheral excretion of virus or recovery from cerebrospinal fluid was rare and, therefore, of no diagnostic value. Even in primary infections detection of seroconversion would be too slow to be useful. Specialized serologic approaches have previously been suggested but are of unproved value because they were not related to viral isolation from brain.[32,33] Isolation of virus from brain is relatively simple, and diagnosis may be further hastened by the use of direct fluorescence microscopy. Pathological examination of brain is of less value in that the demonstration of intranuclear inclusions is of limited usefulness. It is to be hoped that the advent of a successful therapeutic modality will provide the stimulus for increasing diagnostic facilities capable of rapid identification of herpesvirus in biopsy specimens.

A related clinically important but, as yet, unresolved issue is whether brain biopsy is detrimental in nonherpetic encephalitis. Certainly, a small biopsy taken early in the course of infection is preferable to waiting for the need of decompression because of increased intracranial pressure. In this study, historical findings of personality change, dysphasia and focal seizures and definitive evidence of localization by brain scan and electroencephalography were significantly increased with herpes simplex encephalitis. In their presence biopsy is recommended. Without localization, biopsy may miss the specific area of involvement even when herpes simplex virus is the true etiologic agent.[31] Decisions about brain biopsy must therefore be individualized under these circumstances; to wait warrants daily surveillance for evidence of localization.

A word of warning must be issued at this point. Though it may be tempting to increase the daily dose of adenine arabinoside in the hope of improving outcome with herpes simplex encephalitis, such an increase should be avoided at present. The relative fluid-overload problem associated with the low solubility of this compound has already been alluded to. Moreover, adenine arabinoside at higher dosages can depress bone-marrow function,[34] effectively reducing its therapeutic index for treating viral disease. The exact dose range at which severe toxicity begins to occur has not yet been defined, but optimal dose levels should be determined in controlled experimental trials, such as these, rather than during the course of emergency therapy.

Table 3 Comparison of Changes in Laboratory Data Occurring in 28 Patients Treated with Adenine Arabinoside (Ara-A) and 21 Treated with Placebo.*

Measurement	Randomization Group			
	Patients with Abnormality		Mean Change	
	ara-A	*placebo†*	*ara-A*	*placebo*
Reductions				
WBC <5,000/mm	9 (32)‡	2 (9)	6,366	5,250
Hgb <3.5 mg/dl	9 (32)	4 (19)	4.6	5.9
Platelets <100,000/mm	1 (4)	0	—	—
Increases				
SGOT >80 IU/liter	11 (39)	5 (24)	153	83
Bilirubin >1.0 mg/dl	3 (11)	3 (14)	—	—
Creatinine >1.0 mg/dl	1 (4)	1 (5)	—	—

*Maximum values recorded for both groups. Reductions in circulating blood elements are recorded as percentages of pretreatment levels. Therefore they represent minimum values. Increases are recorded as the maximal change for each measurement. Abbreviations: WBC denotes white cell count; Hgb, hemoglobin; & SGOT, serum glutamic oxaloacetic transaminase.

†Data not available on 1 patient.

‡Figures in parentheses represent percentages.

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REFERENCES

1. Meyer HM Jr, Johnson RT, Crawford IP, et al: Central nervous system syndromes of "viral" etiology: a study of 773 cases. Am J Med 29:334-347, 1960.
2. Hanshaw JB: Idoxuridine in herpesvirus encephalitis. N Eng J Med 282:47, 1970.
3. Olson LC, Buescher EL, Artenstein MS, et al: Herpesvirus infection of the human central nervous system. N Engl J Med 277:1271-1277, 1967.
4. Johnson KP, Rosenthal MS, Lerner PI: Herpes simplex encephalitis: the course in five virologically proven cases. Arch Neurol 27:103-108, 1972.
5. Sarubbi FA Jr, Sparling PF, Glezen WP: Herpesvirus hominis encephalitis: virus isolation from brain biopsy in seven patients and results of therapy. Arch Neurol 29:268-273, 1973.
6. Buthala DA: Cell culture studies on antiviral agents. I. Action of cytosine arabinoside and some comparisons with 5-idio-2-deoxyuridine. Proc Soc Exp Biol Med 115:69-77, 1964.
7. Fiala M, Chow AW, Miyasaki K, et al: Susceptibility of herpesviruses to three nucleoside analogues and their combina-

tions and enhancemment of the antiviral effect at acid pH. J Infect Dis 129:82-85, 1974.
8. Jones SR, Luby JP, McElligott D: Comparative sensitivities of herpes simplex virus types I and II (HSV_1 and HSV_2) to antiviral drugs. Clin Res 21:603, 1973.
9. Nolan DC, Carruthers MM, Lerner AM: Herpesvirus hominis encephalitis in Michigan: report of thirteen cases, including six treated with idoxuridine. N Eng J Med 282:10-13, 1970.
10. Rappel M, DuBois-Dalcq M, Sprecher S, et al: Diagnosis and treatment of herpes encephalitis: a multidisciplinary approach. J Neurol Sci 12:443-458, 1971.
11. Illis LS, Merry RTG: Treatment of herpes simplex encephalitis. J R Coll Physicians Lond 7:34-44, 1972.
12. Farris WA, Blaw ME: Cytarabine treatment of herpes simplex encephalitis. Arch Neurol 27:99-102, 1972.
13. Chow AW, Ronald A, Fiala M, et al: Cytosine arabinoside therapy for herpes simplex encephalitis — clinical experience with six patients. Antimicrob Agents Chemother 3:412-417, 1973.
14. Breeden CJ, Hall TC, Tyler HR: Herpes simplex encephalitis treated with systemic 5-iodo-2'-deoxyuridine. Ann Interm Med 65:1050-1056, 1966.
15. Nolan DC, Lauter CB, Lerner AM: Idoxuridine in herpes simplex virus (Type I) encephalitis: experience with 29 cases in Michigan, 1966 to 1971. Ann Intern Med 78: 243-246, 1973.
16. Boston Interhospital Virus Study Group and the NIAID-Sponsored Cooperative Antiviral Clinical Study: Failure of high-dose 5-iodo-2'-deoxyuridine in the therapy of herpes simplex virus encephalitis: evidence of unacceptable toxicity. N Eng J Med 292:599-603, 1975.
17. Shannon WM: Adenine arabinoside: antiviral activity in vitro. Adenine Arabinoside: An antiviral agent. Edited by D Pavan-Langston, RA Buchanan, CA Alford Jr. New York, Raven Press, 1975, pp 1-43.
18. Sloan BJ: Adenine arabinoside: chemotherapy studies in animals, Adenine Arabinoside: An antiviral agent. Edited by D Pavan-Langston, RA Buchanan, CA Alford Jr. New York, Raven Press, 1975, pp 45-94.
19. Luby JP, Jones SR, Johnson MT, et al: Sensitivities of herpes simplex virus types 1 and 2 and varicella-zoster virus to adenine arabinose and hypoxanthine arabinoside, Adenine Arabinoside: An antiviral agent. Edited by D Pavan-Langston, RA Buchanan, CA Alford Jr. New York, Raven Press, 1975, pp 171-175.
20. Connor JD, Sweetman L, Carey S, et al: Susceptibility in vitro of several large DNA viruses to the antiviral activity of adenine arabinoside and its metabolite, hypoxanthine arabinoside; relation to human pharmacology, Adenine Arabinoside: An antiviral agent. Edited by D Pavan-Langston, RA Buchanan, CA Alford Jr. New York, Raven Press, 1975, pp 177-196.
21. Whitley RJ, Ch'ien LT, Buchanan RA, et al: Studies on adenine arabinoside — a model for antiviral chemotherapeutics, Antiviral Mechanisms: Perspectives in virology. Edited by M Pollard. New York, Academic Press, 1975, pp 315-336.
22. Glazko AJ, Chang T, Drach JC, et al: Species differences in the metabolic disposition of adenine arabinoside, Adenine Arabinoside: An antiviral agent. Edited by D Pavan-Langston, RA Buchanan, CA Alford Jr. New York, Raven Press, 1975, pp 111-133.
23. Kinkel AW, Buchanan RA: Human pharmacology, Adenine Arabinoside: An antiviral agent. Edited by D Pavan-Langston, RA Buchanan, CA Alford Jr. New York, Raven Press, 1975, pp 197-204.
24. Ch'ien LT, Cannon NJ, Charamella LJ, et al: Effect of adenine arabinoside on severe Herpesvirus hominis infections in man. J Infect Dis 128:658-663, 1973.
25. Ch'ien LT, Cannon NJ, Whitley RJ, et al: Effect of adenine arabinoside on cytomegalovirus infections. J Infect Dis 130:32-39, 1974.
26. Johnson MT, Luby JP, Buchanan RA, et al: Treatment of varicella-zoster virus infections with adenine arabinoside. J Infect Dis 131:225-229, 1975.
27. Ch'ien LT, Whitley RJ, Nahmias A, et al: Antiviral chemotherapy and neonatal herpes simplex virus infection: a pilot study—experience with adenine arabinoside (ARA-A), Pediatrics 55:678-685, 1975.
28. Ch'ien LT, Whitley RJ, Alford CA Jr, et al: Adenine arabinoside for therapy of herpes zoster in immunosuppressed patients: preliminary results of a collaborative study. J Infect Dis 133: Suppl:A184-A191, 1976.
29. Whitley RJ, Ch'ien LT, Dolin R, et al: Adenine arabinoside therapy of herpes zoster in the immunosuppressed: NIAID Collaborative Antiviral Study. N Engl J Med 294:1193-1199, 1976.

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Malignant Non-Chromaffin Paraganglioma Of The Retroperitoneum

George W. Adams, Jr., M.D.
and
Henry C. Hudson, M.D.*

ABSTRACT

A large malignant non-chromaffin paraganglioma of the retroperitoneum which was erroneously diagnosed as hypernephroma is presented. A review of literature in this rare tumor is capsuled. Our patient is the oldest person reported to have this tumor. The neoplasm was also the largest recorded in the literature.

CASE REPORT

A 74-year-old white male presented to his family physician with a chief complaint of sudden onset of right upper quadrant pain. Approximately one month prior to this he had undergone a routine physical exam with no abnormal findings. On this visit a firm, large, right upper quadrant mass was present which was tender to palpation. His pack cell volume was 33, a drop from 38 six months previously. He was admitted to the hospital for surgical and urological consultation. He denied any urinary symptoms whatsoever. He had noted anorexia, approximately 30 pound weight loss over a six-month period, and that he could no longer fasten his belt. The most pertinent physical finding was a large firm 8x10 cm. mass in the right upper quadrant which moved on inspiration.

Initial laboratory studies disclosed a hemoglobin of 9.6 gm. with a hematocrit of 30 per cent. White blood count (WBC) was 7,000 with a normal differential. Urinalysis revealed 3-5 WBCs per high power field with occasional coarse granular cast. Blood urea nitrogen was 30 mgm. per cent; total protein 6.0 gm. per 100 ml.; albumen 2.5 gm. per 100 ml. SGOT was 83 mgm. per cent. Amylase was 169 mgm. per cent.

EKG and chest x-ray were normal. Infusion pyelogram showed a normal left kidney and collecting system. On the right a distorted collecting system was markedly depressed by a large non-calcium bearing mass. This study was interpreted as possible bifid collecting system with a large renal cyst, tumor or hydronephrosis involving the upper segment.

Renal scan revealed normal left kidney and poor function on the right. Liver scan and cholecystogram were normal. Barium enema demonstrated the hepatic flexure depressed by a large extrinsic mass. Upper GI series depicted marked displacement of the second portion of the duodenum anteriorly and to the left by a large retroperitoneal mass.

On the renal arteriogram, a tremendous tumor mass deriving its blood supply from the right renal artery occupied the entire right upper quadrant. (Fig. 1). The mass displaced the kidney inferiorly and the aorta to the left. There were numerous arteriovenous communications. The appearance of the tumor was suggestive of origin from renal parenchyma.

Venacavagram was significant in that the vena cava was displaced anteriorly and to the left, but there was no intracaval tumor present.

At that time, the general concensus was that this mass was a large renal cell adenocarcinoma, possibly adrenal carcinoma. Surgery was advised.

A right subcostal incision was made extending across the midline. A tremendous tumor mass veiled anteriorly by peritoneum with numerous large dilated veins was exposed. The peritoneum was adherent to the tumor. The right kidney was quite atrophic and depressed inferiorly. There was no liver metastasis. The tumor was extremely vascular and bleeding was profuse. Where the tumor was adherent to the vena cava, rents were made in the great vessel twice. These were sutured with 5-0 arterial silk. The mass was also adherent to the inferior surface of the liver. When the tumor was extracted, this surface was found to be denuded and required hot packs and suture ligation to control the bleeding. The patient tolerated the procedure well without a drop in blood pressure. He received seven units of blood intra-operatively.

The postoperative course was remarkably smooth. He did

Figure I.. Renal arteriogram showing large right upper quadrant mass displacing the aorta to the left.



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experience a retroperitoneal bleed on the seventh post-operative day requiring transfusion of two units of blood. He was discharged on the 19th post-operative day in excellent condition. Follow-up at three years found the patient well with no signs of recurrence. Interestingly, he has contracted adenocarcinoma of the prostate since the surgery.

PATHOLOGY

The neoplasm measured 23 cm. in diameter and weighed 2800 grams. On its external surface the tumor had a lobular pattern and was partly encased in a very thick fibrous membrane. On sectioning, the tumor mass bulged above the surface, and it had a variegated, yellowish orange appearance. The solid portion of the tumor occurred in nodules which had a waxy consistency. There were large areas of necrosis and hemorrhage, in fact there was a cystic degeneration of the center of the tumor. This gross appearance strongly suggested hypernephroma.

Histopathologic examination was very thorough by several pathologists. (Fig. II). The tumor was quite cellular, being composed of large, ovoid to almost round cells. In the most part, the cells had abundant cytoplasm that was darkly eosinophilic. The cytoplasm was only slightly granular in quality. The cells had compact nuclei that tended to be periphically located. The PAS stain showed bright staining crystalline material in many cells. This material was diastase resistant. There was no microscopic invasion of the kidney or liver. One pathologist felt this might be adrenal cortical carcinoma. Several others concurred that this was malignant non-chromaffin paraganglioma.

COMMENT

Non-chromaffin paraganglioma is a tumor of soft tissues always associated with skeletal muscle or musculofascial planes.[1] It is usually located in the deep tissues of the extremities, particularly the thigh and gluteal regions.[2]

Smetana and Scott[2] reported on malignant non-chromaffin paraganglioma in 1951. Most of their cases involved the extremities, but there were four tumors of the retroperitoneum. Microscopically, the neoplasm was often mistaken for a metastatic lesion of epithelial origin. Renal carcinoma of the hypernephroid type was most commonly suspected; hepatic cell carcinoma was the suggested diagnosis in several instances, and less often malignant myoblastoma, lipasarcoma or other tumors. They hypothesized that this tumor derives from cells composing vascular glomera of paraganglia, which are structurally similar to the carotid body and occur principally in relation to vessels traversing voluntary muscle. Certain structures of undetermined nature, but histiologically reminiscent of paraganglionic glomera, have been discovered in the soft tissues surrounding the large femoral vessels by Dr. Lent C. Johnson. Christopherson, Foote and Sttewart[3] published an article in 1952 on a series of neoplasms that corresponded very closely to the gross description of Smetana and Scott. They coined the term alveolar soft part sarcoma. Therefore the literature is very confusing to review due to the multitude of titles bestowed on this neoplasm or tumors of similar derivation (non-chromaffin paraganglioma, alveolar soft part sarcoma, chemodectoma, granular myoblastoma).

Karnachow and Magner[4] postulated that the neoplasm might be derived from pleuripotent epithelial cells or neural crest of Schwann cells by a process of dedifferentiation. Udekwu and Pulvertaft[5] suggested the possibility of origin from a fibroblast-like cell with granular cytoplasm.

Electron microscopy[6] reveals strong similarities between alveolar soft part sarcoma and paragangliomas of carotid body type suggesting that the tumor might arise from displaced paraganglionic mesoderm.

The striking organoid, endocrine-like pattern, uniform, benign-appearing cellular features with absence of mitotic figures, and the presence of fuchsinophilic crystals of non-chromaffin paraganglioma distinguish it from other malignant tumors.[7]

The most frequent reason for the patient to seek medical aid is a noticeable mass. When there is associated pain, it is not sharp or extreme. Some patients present with malaise, easy fatigability, and general bodily discomfort. Weight loss is not uncommon. In summary, the local symptoms were referable to the presence of metastasis, making the prognosis most unfavorable.[8]

Lieberman,[9] et al reviewed 53 cases in 1966. Generally this neoplasm pursues a long course (47%, 10 years survival) but is unrelenting with frequent local recurrence. Metastasis may be delayed, but eventually occurs in virtually all cases. The most frequent sites of metastasis are lungs (42%), bone (19%), and brain (15%). Lymph node metastasis is infrequent. Vascular invasion occurs but can not be used as an indicator for prognosis, because it occurs in the more benign acting tumors as well as the aggressive ones.

Leiberman found that non-chromaffin paraganglioma occurs more often in the female and has a preference for the right side of the body. Tumors developed at an earlier age in the female (average of 20 years in females, 30 in males).

Overall, if the patient was under the age of 20 when the tumor was discovered and had adequate surgical treatment, there was greater chance of survival.

At the present time, there have been 22 reported cases of retroperitoneal non-chromaffin paraganglioma. Two cases were presented in the *Journal of Urology*. One was a primary tumor of the bladder.[10] The other described left renal involvement by metastasis.[11] Nephrectomy[12] has been required in several cases in order to facilitate total excision of the adjacent tumor mass. Sessions and Scott[13] did a nephrectomy and excised portions of the aorta and vena cava (requiring synthetic graft) in a young man in 1960. In our case, the tumor was so vascular and attached so securely to the kidney, nephrectomy was mandatory.

In a review article by Olson and Abell,[14] twelve of 21 patients either had metastases or multiple primary neoplasms. Only 9 patients had single retroperitoneal tumor masses. They concluded that retroperitoneal paragangliomas are more likely to be histologically malignant, to infiltrate and metastasize, and to occur in younger patients than are similar neoplasms in other locations.

In their review 12 patients were male, 9 were female. The age range was 5 to 62 years with an average age of 31. The average duration of symptoms before seeing a physician was 17 months.



Figure II.
Microscopic section of non-chromaffin paraganglioma of the retroperitoneum x 400.

Most neoplasms were closely related to the aorta, particularly its bifurcation or to the iliac vessels. Fifteen tumors had greatest diameter of 8 cm. or more, whereas there were five with a diameter of 15 cm. or more. Our case is the largest tumor reported — 23 cm., 2800 grams.

In general, the prognosis for patients with malignant non-chromaffin paraganglioma of the retroperitoneum is considered to be good. In the 9 patients with a single primary tumor, survival ranged from 2 to 67 months. The average age of patients with tumors which metastasized was 22 years compared with an average age of 36 years for the remaining patients.

Treatment has primarily been surgical, but as stated local recurrence seems to be the rule rather than the exception. Rubenfeld[15] reported on administration of 5500 rads over 36 days to a patient with pulmonary metastasis with no effect whatsoever. Hence, it is considered radioresistant. Chemotherapy has also been deemed ineffective. Christopherson,[15] et al found metastasis on one of the patients in their study eighteen years post-operative.

It is evident that there is still considerable confusion and controversy about this neoplasm, particularly its histiogenesis and natural history. In order to establish a rational approach for treatment and prognosis, an attempt to recognize this tumor more readily and properly classify it must be effected. Also, if a retroperitoneal neoplasm distorting the kidney is found, malignant non-chromaffin paraganglioma should be included in the differential diagnosis.

REFERENCES

1,3. Christopherson, W. M., Foote, F. W., Jr. and Stewart, F. W. Alveolar Soft Part Sarcomas: structurally characteristic tumors of uncertain histiogenesis. Cancer, 5:100-11, 1952.

3,8. Smetana, H. F. and Scott, W.F., Jr. Malignant Tumors of Nonchromaffin Paraganglia. Md. Surgeon, 109, 330-349, 1951.

4. Karnachow and Magner. The Histogenesis of Alveolar Soft Part Sarcoma. J. Path. Bact. 86: 169-77, 1963.

5. Udekwu and Pulvertaft. Studies of an Alveolar Soft Tissue Sarcoma. Brit. J. Cancer 19: 744-48, 1965.

6. Welsh, R. A., et al. Histogenesis of Alveolar Soft- Part Sarcoma. Cancer 29: 191-204, Jan. 1972.

7. Dutt, A.K. et al. Alveolar Soft-part Sarcoma with Invasion of Bone. A case report, J. Bone and Joint Surg. 51A:

9. Lieberman, P. H., Foote, F.W., Jr., Stewart, F.W. and Berg, J.W. Alveolar Soft-Part Sarcoma. JAMA 198: 1047-51, Dec. 1966.

10. Glucksman, M.A. et al. Malignant Non-chromaffin Paraganglioma of the Bladder. J. Urol. 89: 822-5, June 1963.

11. Cohen, S.M. et al. Malignant Non-chromaffin Paraganglioma with Metastasis to the Kidney. J. Urol. 96: 122-6, Aug. 1966.

12. Lagace, R. et al. Non-chromaffin Paraganglioma of the Kidney with Distant Metastases. Canad. Med. Assoc. J.99:1095-8, Dec. 1968.

13. Olson, J.R. and Abell, M.R. Non-Functional, Non-Chromaffin Paragangliomas of the Retroperitoneum. Cancer, 23, 1358-1367, 1969.

14. Sessions, R.T. and Scott, H.W. Retroperitoneal Non-Chromaffin Paraganglioma. Amer. J. Urol. 99:70-76, 1960.

15. Rubenfeld, S. Radiation Therapy in Alveolar Soft Part Sarcoma. Cancer 28: 577-80, Sept. 1971.

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Oxygen Therapy During Recovery From Anesthesia

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Hypoxia is one of the complications which occurs during recovery from different anesthetics. It is more frequently seen in patients with a history of chronic pulmonary problems, obesity, the aged[1] or those with anemias. Certain types of operations such as thoracic upper abdominal and prolonged procedures is often associated with post-op hypoxia unless oxygen is given during recovery of anesthesia.

Oxygenation of our body depends on two major processes, uptake and distribution of oxygen. The respiratory system is totally responsible for the uptake of oxygen and because of the function of this system, oxygen is being transferred from outside to the alveolas. Distribution of oxygen relies on cardiac output and its contents, mainly red cells which would transfer oxygen from the alveolas to different cells of our body.

There are several factors which occur intraoperatively and would interfere with the uptake and distribution of oxygen in post-op patients.

A. Disturbances in uptake of oxygen.

(1) Respiratory depression[2] is often associated with almost every available technique of general anesthesia, narcotics, muscle relaxants, sedatives and potent anesthetic agents such as halothane, would all depress the respiration which would result in hypoventilation and hypoxia.

Unfortunately, the respiratory depression following general anesthesia is not always terminated at the end of the operation and in some cases may continue for several hours post-operatively.

(2) Ventilation perfusion abnormality[3,4] such as those seen with atelectasis, retained secretions or change in pattern of respiration could result in post-op hypoxia; shallow, fast breathing during recovery from potent anesthetics would give rise to severe ventilation perfusion abnormality and hypoxia.

The function of the cell of the upper airway is often depressed during recovery state of potent anesthetics and that may result in retention of secretions and abnormality in ventilation-perfusion ratio.

Massive blood transfusions during major operations could result in pulmonary microemboli and ventilation-perfusion abnormality. The use of microfilter[5] such as Pall blood filter for massive blood transfusions has diminished the incidence of pulmonary insufficiency following major surgical procedures.

Disturbances in Distribution

Hemodynamic abnormality may interfere with distribution of oxygen; hypotention and hypovolemia are sometimes present in those patients where intra-op blood loss has not been properly replaced; in some of these patients blood loss during operation was mainly replaced using large volume of balance salt solutions (lacted ringers or normosome) resulting in normal blood volume but with less red cell mass which would decrease the oxygen-carrying capacity of the blood. Cardiac arrhythmia is sometimes a problem during recovery from anesthesia. Severe cardiac arrhythmias could decrease the cardiac output and that could result in hypoxia.

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B. Factors unrelated to uptake and distribution.

Temperature Alteration

Hyperthermia and hypothermia both would increase oxygen consumption, hyperthermia by means of increasing the body metabolism and hypothermia by means of producing shivering. Severe shivering could increase oxygen consumption four or five times above the normal level. Shivering in post-op patients may not always be due to hypothermia. Potent anesthetic agents such as halothane and ether are capable of producing shivering.

In our opinion, oxygen should be administered to all patients, regardless of age or type of operation, who are recovering from general anesthesia although most of these patients may not need the oxygen. It is sometimes very difficult to discover those who are badly in need of it.

In some of the patients who are recovering from major thoracic or upper abdominal operations, also those who are suffering from severe pulmonary dysfunction, oxygen by itself is not sufficient to prevent hypoxia and often mechanical ventilation is required for a few days post-operatively.

Complications

Oxygen is generally safe to be used in the Recovery Room. One may bear in mind the complications of hypoventilation and respiratory arrest[6] which may occur during the use of oxygen in old patients who have been suffering from chronic pulmonary disease. In this group of patients, the respiratory center is no longer sensitive to carbon dioxide (CO^2) and is only sensitive to oxygen. Any rise in plasma oxygen concentration may give rise to hypoventilation or respiratory arrest. Although this complication is very rare, if oxygen is being administered to this group of patients, their respiration, blood pressure and pulse should be monitored very closely for 5 to 10 minutes following administration of oxygen. In case of abnormal response, severe hypoventilation, tachycardia or hypertension, it might be necessary to discontinue the oxygen.

In case of respiratory arrest, oxygen administration should be stopped immediately and patient should be ventilated mechanically with room air until spontaneous respiration is resumed.

An oxygen concentration of 30-40% is often sufficient to prevent hypoxia in immediate post-op period. Arterial blood gas analyzer would let you know precisely how much oxygen is needed. One hundred percent oxygen is required in patients with myocardial infarction,[7] severe pulmonary emboli, severe anemia, shivering and convulsion. ●

References

1. Le Blanc, P., Ruff, F., Milie-Emili, J.: Effect of age and body position on "airway closure" in man. J. Appl. Physiol. 28: 448-451, 1970.
2. Cullen, D. J. and Eager, E. I., II: The effect of anesthetic depth on the respiratory and cardiovascular response to hypoxia in dogs: A close response study. Anesthesiology 33: 487-496, 1970.
3. Comroe, Julius H.: Physiology of respiration. 41-68.
4. West, John: Respiratory physiology. 51-72.
5. Anesthesiology Review: Blood microfilters and the anesthesiologist, December 1976, 11-15.
6. Egan, D. F.: Fundamentals of inhalation therapy. 250-273, 1969.
7. Braunwald, E. (ed), The myocardium: Failure and infarction, New York, H. P. Publishing Co., Inc., 1974.

Oral Contraceptives, Thromboembolic Disease, And Hypertension: A Review

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Since oral contraceptives were first released for public use in the early 1960s, they have been highly valued as a reliable, reversible means of birth control. Widespread use has been associated with increasing reports of possible side effects. As is true with any medication, the potential for harm to the patient must be weighed against the potential for gain.

However, rather than representing a diseased population in whom certain risks are clearly justifiable, the population at risk here is composed primarily of healthy young women. In addition, because this population is composed of literally millions of women, "small risks" assume added significance. Although it has been stated that such a risk should be acceptable to women to avoid the risk of pregnancy and death from pregnancy[1], this type of reasoning ignores the fact that other methods of contraception are now available to both sexes.

It therefore seems pertinent to review the data concerning certain of the proposed life-threatening complications, deep vein thrombosis and pulmonary emboli, strokes, and myocardial infarctions as well as a more common one, hypertension.

Certain problems that are unique to the study of potential complications of "The Pill" were discussed by Seigel and Corfman[2]. Formulations of oral contraceptives are constantly changing, which affects the incidence of those side effects thought to be dose related. Reproductive age women represent a fluid group, as some women discontinue use of oral contraceptives while some from a control group may decide to begin using them. With one exception[29] the groups of control and oral contraceptive users are self selected rather than randomized, introducing a large number of potential biases. In addition there are understandably few studies that are double blind for the participants and the examiners. Since a large number of young women are currently oral contraceptive users and even more have at some time used them, a certain percentage of drug users would be expected in any disease process studied and increased risks must be carefully evaluated[3]. Widespread publicity of side effects may lead to certain diagnoses being considered more readily in oral contraceptive users than in non-users. Furthermore, other investigators may interpret the same data base by a different statistical method and reach conclusions markedly different from that of the original investigator. Such epidemiological problems have resulted in much contradiction in the literature.

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A Confusing Issue

Probably the issue that has been most hotly debated is whether or not oral contraceptive use is associated with a higher incidence of thrombophlebitis and pulmonary embolism. The well known difficulty in accurate diagnosis of both pulmonary thromboembolism and deep vein thrombosis further confuses an already confusing issue. In none of the studies have I^{25} labeled fibrinogen, Doppler ultrasonic flow studies, plethysmography or venograms been used routinely to verify the diagnosis of deep vein thrombosis. Recently, Richards, et al[4] found that 63% of patients with no phlebographic evidence of deep vein thrombosis have at least one sign suggesting this diagnosis on physical examination. Other studies have shown that up to two-thirds of patients proven to have deep vein thrombosis have no indicative signs or symptoms[5]. Problems in the accurate diagnosis of pulmonary emboli have also been reviewed.[6].

In 1961, Jordon[7] first reported a young woman who developed a pulmonary embolus while taking oral contraceptives. In 1967, a subcommittee of the British Medical Research Council released preliminary results suggesting that oral contraceptives are associated with an increased incidence of thromboembolic disease[8]. Since that time the primary evidence that this is true rests on a series of retrospective case control studies conducted in different countries in different ways. These studies have been evaluated extensively in review articles [9, 10, 11]. Following is a brief summary of these studies and their primary criticisms:

1. In 1967, the Royal College of General Practitioners[12] reported a group of 147 patients who saw their general practitioner for thromboembolic disease, of whom 18 took birth control pills. In a control group matched for age and marital status of 294 patients, only 19 were oral contraceptive users. However, 72 of these patients had superficial thrombophlebitis only.

2. In 1968, Inman and Vessey[13] compared 77 British patients who died of a pulmonary embolus (based on death certificates) with controls selected from the patients' general practitioner's files, matched for age and parity. Sixteen of the 26 patients with no predisposing cause for pulmonary embolism used oral contraceptives, compared with 4.2 expected from the control data. Nine of 51 patients with a predisposing cause took anovulants, 6.8 being expected based on control data. The authors recognized that the study was limited by the lack of information on the health of the controls and by fewer sources of information on contraceptive use in the controls.

3. Vessey and Doll have published two papers in which

patients with London hospital admissions for thromboembolic disease were compared with patients admitted for other diseases. In the first series[14] 45% of patients with thromboembolic disease used birth control pills compared with 9% of controls. In the expanded series[15], 50% of the cases compared with 14% of controls were users. It was noted that the cases, whether oral contraceptives users or not, differed from the controls in three ways.

(a) A history of thrombophlebitis in a mother or sister was three times as common in cases.

(b) A past history of thrombophlebitis was more common.

(c) The average weight of the case group was 10 pounds greater than the controls.

This suggests that other factors were possibly influencing these women's susceptibility to thromboembolic disease. Although Vessey and Doll calculated that the more common history of heavy cigarette smoking in the cases compared with the controls was not statistically significant, other authors disagree[16].

4. Sartwell, et al in 1969[17] compared 175 patients admitted to hospitals in five American cities with idiopathic thrombophlebitis, pulmonary embolism or cerebral thrombosis or embolism with 175 patients admitted for other causes. Sixty-seven of the cases compared with 23 of the controls had used oral contraceptives within one month of admission. The study has been criticized[10] because pairs were not matched for weight, history of smoking or family hostory of thromboembolic disease. It was also noted that the large number of student nurses in the group represented a subset with special characteristics. Single women were included in some cities but excluded in others. A follow-up of this study[18] included all cases of thromboembolic disease except strokes with an average of approximately three controls each for 461 cases. In the total series, 30.2% of cases were on anovulants compared with 18.7% of controls. In the group of 104 idiopathic cases, 56.7% of cases were oral contraceptive users compared with 18.8% of controls.

5. The Boston Collaborative Drug Surveillance Program[19] compared 43 patients hospitalized with idiopathic thromboembolic disease with 842 controls and found that 72% of the cases were oral contraceptive users compared with 20% of the controls. In addition, 17 of these 43 patients had a discharge diagnosis of pulmonary embolism. In 14 of these, the discharge summary included a report of a lung scan with filling defects consistent with pulmonary embolism. Eleven of these 14 patients were on oral contraceptives. The control group in this series had no contraindication to the use of birth control pills. When divided into sub-groups, based on smoking, no significant differences in oral contraceptive users was found between the sub-groups. Goldzieher[10] has stated that such a high percentage of oral contraceptive users in this group must represent physician bias in being more likely to hospitalize patients on oral contraceptives.

Increased Risk Suggested

Retrospective studies demonstrate the frequency of oral contraceptive use in patients with a disease, while actually the desired statistic would be the risk of the disease in a patient on oral contraceptives[2]. These studies can only suggest an associated increased risk of thromboembolism in oral contraceptive users. Drill[20] published a review in which he stated that prospective studies have failed to confirm this hypothesis. He compiled reports of uncontrolled prospective studies of 80,000 women who received oral contraceptives for greater than 1,000,000 cycles and found the incidence of thromboembolic disease to be 0.97 cases per 1,000 women per year, actually less than an average normal incidence of 2.2 cases per 1,000 women per year. This study has been extensively criticized as being statistically unacceptable by many other investigators[21,22,23,24], mainly because of the lack of control groups and because most of these studies were not designed to detect thromboembolic disease. Prospective studies are not really superior to retrospective studies unless they include adequate controls. A prospective controlled study is being done by the British Family Planning Association, but these results have not yet been published[25].

A preliminary report of a large scale prospective case control study involving approximately 23,000 takers of oral contraceptives and a similar number of controls, matched for age and marital status, has been published by the Royal College of General Practitioners[26]. This report is based on 35,000 woman years of oral contraceptive usage. Pulmonary emboli were not included in this report because the number of reported episodes was so small. The risk of developing deep vein thrombosis of the leg was found to be 5.6 times higher in pill users than in non-users. This is similar to the estimated risk of Vessey and Doll in their retrospective study.[14] The initial report was updated in 1975[27], including data from two and a half more years and excluding thrombophlebitis occuring in women with medical conditions predisposing to thromboembolic disease, pregnant women, women up to one month postpartal, and postoperative patients. These incidences were also standardized for age, parity, cigarette smoking and social class. Again, the risk in takers compared with the risk in controls was 5.6. However, as pointed out earlier, the lack of randomization of participants to control or subject groups may introduce unknown biases. Also, definite criteria for the diagnosis of deep vein thrombosis were not established but were left up to the individual physician. Since the same physician examined both the subjects and the controls, this may not alter the accuracy of the results.

The Royal College of General Practitioners in Australia has also established a prospective study[28] in which, interestingly enough, a negative correlation was found between the use of anovulants and superficial vein thrombosis. The diagnosis of superficial vein thrombosis was based on the patient's response to the question "Have you had any trouble with clots in the past year?" This non-specific method of diagnosis may explain the difference between the findings in this study and the previously mentioned studies.

One randomized prospective study has been done, although this was not a double blind study[29]. 9,898 Puerto Rican women were randomly assigned to oral or non-oral contraceptives. Eighty-seven per cent of the participants were followed for a total of eight years, with bimonthly clinical interviews and yearly physical exams. All cases of thrombophlebitis were evaluated by an internist. The incidence of thrombophlebitis in the oral group was 1.8 and in the control group was 1.6, not a statistically significant

difference. No mention was made of the number of smokers in either group. It is not known if cultural differences could somehow account for the difference in statistics between this study and those in the United States and Great Britain. Goldzieher and Dozier[10] have calculated that this sample size would permit a 95% certainty of detection of a relative risk of 2.5 or more and a 99% certainty of detecting a risk of 3.0 or more. Doll and Vessey[30] on the other hand state that at least 10,000 cases and 10,000 controls followed over a period of 10-15 years would be necessary to note an increased risk of thromboembolic disease.

Studies in both the United Kingdom[31] and the United States[18] have suggested that larger doses of estrogen are associated with an increased risk of thromboembolism, although this has been denied by other investigators[10, 20, 32]. At any rate, studies done since the lower dose estrogen oral contraceptives have become more widely used [18, 26] have continued to suggest an increased risk in pill takers.

Other factors may be operable in this apparent increased risk, however. In the Boston Collaborative Drug Surveillance Program, a deficit of blood type O patients was noted in those patients receiving anticoagulants. This observation was expanded into a cooperative study in the United States, the United Kingdom and Sweden of the ABO blood type of patients admitted with a diagnosis of thromboembolic disease[33]. A small but not definitely satistically significant deficit of blood type O patients was noted in medical patients with complicating disease and healthy young women not pregnant or on anovulants. However, a statistically significant deficit of type O patients was found in young women who developed idiopathic thromboembolic disease during pregnancy or using oral contraceptives.

An increased incidence of thromboembolic disease in the post operative period in patients on anovulatory steroids has also been reported. Greene and Sartwell[34] compared a group of women who developed thromboembolic disease while hospitalized for surgery or trauma with a group hospitalized for similar reasons who did not develop thromboembolic disease. The relative risk for oral contraceptive users in 60 age-matched case control pairs was estimated at over six-fold. A similar study in England[35] found a three to four-fold increased risk in contraceptive users. I^{125} fibrinogen studies detected deep vein thrombosis in six of 22 post-op oral contraceptive users and none in 15 patients not on the pill[36]. Drill[37] refers to a German study which noted no increased hazard for post operative complications in women on anovulants.

Clotting Factors

The changes in clotting factors reported to be associated with oral contraceptive use have been reviewed in other articles[10, 38]. Hougie[39] lists reports of increase in prothrombin, factors VII, IX and X, fibrinogen, plasminogen and shortening of platelet aggregation time, as well as a decrease in antithrombin III. However, some of these changes occur in pregnant women, who do not have an increased incidence of thromboembolic disease. It is generally accepted that these changes cannot be said to represent a true "hypercoagulable" state. Several laboratories are working on methods by which to identify women predisposed to thrombosis[40, 41], but thus far no widely accepted screening test has emerged.

The second complication thought early to be associated with oral contraceptive use was cerebrovascular accidents. Lorentz[42] first reported in 1962 a 41-year-old woman who developed aphasia while taking 20 mg of Enavid a day for dysmenorrhea. In their review of death certificates, Inmann and Vessey[13] identified only twenty seven cases of cerebral thrombosis. Of the seventeen cases thought to have predisposing factors, none were oral contraceptive users. Of the cases without predisposing factors, half had taken "the pill." Based on the combined group, they reported a seven to eight times increased risk of cerebral thrombosis in young women on oral contraceptives.

A review of mortality trends in the United States in 1969[43] found no relative increase in deaths from strokes associated with increased oral contraceptive use. However, as pointed out by Bickerstaff[44], the neurological sequelae of strokes in young women are also a matter of concern. Based on well defined clinical criteria for the diagnosis of cerebral thrombosis, they found twenty-five cases in women less than 45 years of age without predisposing vascular abnormalities, cardiovascular disease or renal disease during a ten year period prior to 1964. Between 1964 and 1966, when oral contraceptives were becoming more commonly used, they saw an additional 25 young women without predisposing causes who had a clinical diagnosis of cerebral thrombosis. Of these 25 eighteen were oral contraceptive users. In the United States, Cole[45] reported five young women with strokes seen in a one year period, all of whom were taking anovulants.

At about this time other investigators began to suggest that there had previously been a higher incidence of strokes in young women than had been recognized. 12.4% of patients were carotid ischemic disease proven angiographically in one study were women between the ages of 15 and 45[46]. Of the 26 such patients in this study, 24 were known not to be oral contraceptive users and one had discontinued them three months previously. There was no increase in the number of women admitted to Duke with cerebrovascular accidents from 1960 to 1968[47]. However, during the two year period of 1967-68, almost all of the young women who did have CVA's were oral contraceptive users. Atherosclerosis or other underlying vascular disease did not seem to be the etiological factor in these women but no significant clinical or angiographic difference was noted between those who did or did not take hormones. No increased incidence of stroke in young women who were residents of Rochester, Minnesota, was found in comparing angiographic data from 1961-66 with that from the preceeding 16 years[48]. Illis et al[49] also reviewed angiographic records and reported no increase in the incidence of CVA's in the years after contraceptives were on the market. However, at the time of their study, only approximately 8% of women were oral contraceptive users and small but significant changes could have been missed. Four of the 18 patients who did have CVA's were oral contraceptive users. A follow-up of this study[50] included 12 additional cases. Of the five patients who were under 40, four were on "The Pill." These authors suggested that oral contraceptives might decrease the number of pregnancy related CVA's but would in themselves be a risk factor. Thus a decrease in pregnancy associated strokes might obscure the increase in CVA's associated with oral contraceptives if only the total number of young women have CVA's was considered.

A Six-Fold Increase

In addition to the study based on death certificates, two other retrospective case control studies suggest that pill users are at increased risk[15, 51]. Vessey and Doll[15] in their report based on admissions to London hospitals found that 11 of 19 patients with a discharge diagnosis of cerebral thrombosis were taking oral contraceptives. They felt that this represented a six-fold increase in risk. The criticisms of this study regarding deep vein thrombosis discussed earlier are also applicable to the data on cerebrovascular disease.

The Collaborative Group for the Study of Stroke in Young Women reports a study of strokes in 598 nonpregnant women with two nonpregnant controls each, one from the hospital population and one from the neighborhood[51]. This study was conducted by neurologists from 12 university hospitals in the United States. They found a nine-fold increase in the risk of thrombotic stroke and a two-fold increase in risk of hemorrhagic stroke. The risk was found to be greater in white women than in black and greater in cigarette smokers than in nonsmokers. In 1975, a report of further calculations of this data confirmed that oral contraceptive use alone, without a history of smoking, hypertension or migraine, significantly increased the risk of stroke[52]. The relative risk for stroke rose with increase in blood pressure, from 1 to 6.9 for thrombotic stroke in women not on oral contraceptives and from 3.1 to 13.6 in women who used them. However, these figures do not represent a potentiation of hypertension on the effects of oral contraceptives, but rather the effect is the product of the individual risks. In severely hypertensive women, the risk for hemorrhagic stoke was 21.6 for nonusers and 25.7 for users of oral contraceptives. While smoking itself does not seem to increase the risk of thrombotic stroke, it does seem to be a risk factor in hemorrhagic stroke. Also, smoking seems to enhance the effect of oral contraceptives on CVA's, because there was a 200% increase in risk of stroke in patients who were heavy smokers and oral contraceptive users compared with nonusers who were heavy smokers. Evidence that migraine was an additional risk factor was equivocal.

Goldzieher[10] criticized this study for several reasons. Sixty-six percent of the patients were in the 34-44 age group and age was matched only by decade. Sixty-four percent of the women in the study group could not be interviewed. Findings differ considerably from city to city. There were variations in the control group's use of oral contraceptives when broken down into subgroups.

The prospective study by the Royal College of General Practitioners also showed a small but statistically significant increase in cerebrovascular disease in oral contraceptive users compared with controls[53].

Although some studies have shown no clinically distinct pattern of cerebrovascular disease in oral contraceptive users[47] Gardner et al reported precipitation or aggravation of a vascular headache prior to a cerebral infarction in 15 women who developed a stroke while on oral contraceptives[54]. The pattern was particularly significant if the headache was lateralized and/or associated with transient, focal neurological symptoms. Such patients should be withdrawn from oral contraceptives immediately. Any women who has symptoms of transient ischemic attacks without headache should not be allowed to use oral contraceptives. One investigator suggests that any woman who develops headaches on oral contraceptives should at least be encouraged to consider other methods of contraception[55].

In contrast to the increased incidence of pulmonary embolism and cerebrovascular disease, early studies on side effects of oral contraceptives did not document an increased risk of coronary artery thrombosis[13, 14, 15]. However, as early as 1965 [56, 57], case reports appeared suggesting such an association. Oliver in 1970 studied a group of 21 young women 41 years of age or less who had myocardial infarctions and found similar risk factors for premature ischemic heart disease in those who did not take oral contraceptive agents[58]. He suggested that oral contraceptives might enhance the change of development of myocardial infarction in women otherwise prone to ischemic heart disease. A recent review of myocardial infarction in young women[59] supports this concept of oral contraceptive usage having an additional effect on recognized risk factors, particularly in older patients.

In 1975, Mann and colleagues reported retrospective case control studies in Great Britain supporting the association of myocardial infarction and oral contraceptive use. In a group of 63 women less than 45 years of age hospitalized with a non-fatal acute MI, 29% had used oral contraceptives within one month of admission[60]. In a control group of 189 patients, only 8% had taken oral contraceptives in the preceeding month. However, the patients with MI's also had an increased incidence of heavy cigarette smoking, treated hypertension, diabetes and obesity. An investigation of 219 deaths from myocardial infarction in women under 50 also revealed an increase in the frequency of use of oral contraceptives in the month prior to admission compared with a control group of women from the patients' general practitioners' files[62]. No information on smoking history was available on these patients, but a higher percentage of women with fatal MI's had been treated for diabetes and hypertension. Jain recalculated the data from the study on non-fatal myocardial infarction and concluded that the higher relative risk of an MI seemed related primarily to the history of smoking rather than of oral contraceptive use[62]. Further studies will be necessary to resolve this issue. The British studies have also been criticized [63, 64] as being unrealiable because of the high percentage of other risk factors in cases compared with controls. A proper control group would include women with a similar incidence of risk factors using other methods of contraception.

Publication of the British data prompted the Boston Collaborative Drug Surviellance Program to review their data on MI's in premenopausal women[65]. In 34 patients with myocardial infarctions, 11.8% were currently using oral contraceptives compared with 6.5% of controls. They also found an increased history of cigarette smoking, hypertension, and diabetes in the case patients. When the ratios were standardized for these risk factors they concluded that a modest, if any, increase in myocardial infarction occurred in premenopausal women on oral contraceptives.

No Valid Conclusions

The prospective study of the Royal College of General Practitioners thus far has reported five myocardial infarctions occurring in the oral contraceptive users, with one

MI in the control series[66]. This is an incidence of 13/100,000 women years in the case compared with 2/100,000 women years in the controls. However, the numbers are considered too small to obtain valid conclusions.

In 1971, an angiographic picture in oral contraceptive users with MI's that is quite different from the usual angiographic picture in atherosclerotic heart disease was reported. Dear and Jones reported two patients[67] and Waxler et al an additional three patients[68] in whom angiograms revealed a smooth walled, isolated, segmental occlusion in a proximal branch of the left coronary artery with otherwise normal coronaries. Two additional patients with identical findings were recently reported by Morris[69] et al.

More evidence that oral contraceptives are associated with cardiovascular disease comes from a mortality study recently reported in Lancet[70]. Analysis of mortality trends in 21 countries in women aged 15-44 showed that in each country changes in mortality for all non-rheumatic heart disease and cerbrovascular disease was strongly associated with the prevalance of oral contraceptive use. Changes in cigarette consumption did not correlate with changes in mortality. The relative risk of death from cerebrovascular disease in oral contraceptive users compared with non-users was 2:1, for heart disease and hypertension 5:1 and for all forms of cardiovascular disease, 3:1. By 1972, most countries have adopted "low dose estrogen" pills, so this study indicates that the increased risk of cardiovascular disease continues to exist.

That oral contraceptives might be related to hypertension was first reported by Brownrigg in 1962 with the development of hypertension in a young woman receiving Enavid in large doses (40 mg a day) for the treatment of endometriosis[71]. Owen in 1966 reported a previously normotensive patient who developed hypertension while on contraceptive doses of Enavid[72] It was not until 1967 that articles began to appear in the literature suggesting the hypertension is an additional side effect of oral contraceptives. Woods then described six patients in whom oral contraceptives either induced or intensified hypertension[73]. Independently in the same year, Laragh et al described 11 hypertensive patients on oral contraceptives, six of whom were normotensive prior to beginning the medication[74]. Marked improvement or complete correction occurred in six of eight patients who discontinued the pill. When two patients were challenged with another oral contraceptive, their hypertension again appeared and disappeared. Metabolic studies in eight patients suggested the renin-angiotension system might be involved.

Estimates of the incidence of hypertension in oral contraceptive users run as high as 15-18%[75, 76]. Most authorities estimate the incidence of overt hypertension at approximately 5%[77, 78]. Since millions of women are pill-users, a 5% incidence would represent a significant number of individuals. To look at the incidence from a different perspective, 4% of 570 patients referred to Loma Linda University Medical Center for renin and aldosterone studies were found to have hypertension that resolved with discontinuing oral contraceptives[79]. In a group of 482 patients evaluated for various etiologies of hypertension in Sweden, 1.7% were found to have contraceptive induced hypertension[80].

Also somewhat disturbing are reports of a statistically significant increase in blood pressure in all women taking oral contraceptives[81, 82, 83, 84]. Although the increase reported is small, it may have long term importance since systolic blood pressure has been shown to correlate with both the incidence of coronary artery disease[85] and CVA's[86].

Hypertension has been found to develop as early as one to three weeks after beginning oral contraceptives[79] and as late as six years[87]. Information on factors concerning individual susceptibility to developing oral contraceptive hypertension are contradictory and incomplete. Some studies reveal an increased risk in women with a family history of hypertension[79, 83] but this was not found in other studies[87, 84]. Pre-existing renal disease is thought by some to be a factor[88], but this was not documented by others[79, 89]. Likewise, antecedant preeclampsia is associated with an increased risk of hypertension on the pill in some series[79, 90, 91] but not in others[76, 82, 89]. Saruta et al[76] noted an increase in the incidence of hypertension during a previous pregnancy. In a prospective study of 12,000 women, Ramcharan et al found that women who were older and heavier were more likely to develop hypertension[92]. Saruta et al[76] suggested that the higher incidence of hypertension in their study may be due to a predominence of blacks in the patient population. Thus an ethnic susceptibility to hypertension may be increased with oral contraceptives.

Mild And Reversible

Characteristically the increase in blood pressure associated with oral contraceptive use is relatively mild and reversible[73,77,83,84,93,94]. In a five-year prospective study, Weir et al found a mean increase of 12.3 mm in systolic blood pressure and of 8.8 mm in diastolic blood pressure in those patients who became hypertensive[95]. Blood pressure returned to pretreatment levels within three months after stopping oral contraceptives. However, there are two reports of patients who developed malignant hypertension with blood pressures of 220/150[96] and 230/140[97] which resolved with discontinuation of birth control pills. Zacherle and Richardson reported a patient who twice became hypertensive while taking oral contraceptives[98]. When she discontinued them during the first episode of hypertension, her blood pressure returned to normal. On the second occasion, although her blood pressure approached normal with parenteral antihypertensive therapy, she developed renal failure, eventually requiring bilateral nephrectomy and renal transplant. Zech et al have reported a similar patient[79]. A fifth patient has been reported who developed malignant hypertension while on oral contraceptives[100]. Autopsy revealed the fibrinoid necrosis, proliferative endarteritis and thrombosis characteristic of malignant hypertension.

It is generally agreed that the estrogenic component of oral contraceptives is responsible for the development of hypertension[79, 91] and the progestin component does not affect blood pressure[84, 91]. In a prospective study, no increase in blood pressure occurred in 143 women receiving progestogens only[91]. The mechanism of the estrogen induced increase in blood pressure is still a matter of some debate.

It is appropriate to begin a review of the possible

mechanisms of oral contraceptive induced hypertension with a brief review of the reninangiotensin-aldosterone system. The juxtaglomerular apparatus responds to a decrease in renal perfusion secondary to a decrease in blood pressure or a decrease in effective plasma volume with the release of the enzyme renin. Renin acts on renin substrate which is manufactured in the liver to form angiotensin I. This is hydrolyzed by plasma and pulmonary converting enzemes to angiotensin II. Angiotensin II has a direct vasoconstrictor action and, in addition, causes adrenal secretion of aldosterone, which causes renal sodium retention. The vasoconstriction and the increase in plasma volume result in increased renal perfusion and shut off the stimulus for renin release, in addition to direct feedback of angiotensin II.

There are three different methods for evaluating the function of the renin-angiotensin system. Plasma renin substrate is the amount of angiotensin system. Plasma renin substrate is the amount of angiotensin generated by adding excess renin to the system. Plasma renin activity is the amount of angiotensin generated by the system without additional renin. Plasma renin concentration is the amount of angiotensin generated in the presence of a fixed amount of substrate. Renin concentration is felt to be the most accurate estimate of the actual level of renin in the plasma.[76]

Crane and co-workers were the first to report that the renin angiotensin system was altered by oral contraceptives[101]. They found an increase in plasma renin activity in a patient on oral contraceptives, both under basal conditions and in response to sodium restriction and upright posture. It is generally agreed that oral contraceptives cause an increase in plasma renin substrate and plasma renin activity in a patient on oral contraceptives, both under basal conditions and in response to sodium restriction and upright posture. It is generally agreed that oral contraceptives cause an increase in plasma renin substrate and plasma renin activity in both normotensive and hypertensive women and that the difference between the two groups is not significant[77,89,102,103,104]. However, there is some controversy over the effect of oral contraceptives on plasma renin concentration. In 1969, Skinner and associates found that oral contraceptives caused an increase in renin activity through an increase in the concentration of renin substrate[105]. In normotensive women, this was associated with a decrease in plasma renin concentration. It was hypothesized that hypertension resulted in those women who were unable to adequately suppress renin secretion in the presence of the rising renin substrate concentration induced by estrogen. Saruta et al in a prospective study of 56 women found that although plasma renin activity and plasma renin substrate rose in both those who remained normotensive and those who became hypertensive, the plasma renin concentration fell minimally in those patients who remained normotensive and rose in those who became hypertensive[76]. Their findings support the hypothesis of a defect in the renin angiotensin feedback control system. Angiotensin II levels were not measured in this study. Cain and associates found similarly that plasma renin concentration is decreased in normotensive women on oral contraceptives and reported an increase in circulating angiotensin II in these women[106]. This provides additional evidence that the suppression of renin secretion in normal females in related to increased levels of angiotension II. However, he did not measure angiotensin II in women who developed oral contraceptive hypertension. He pointed out that the defective feedback theory cannot really be considered proven until angiotensin II levels have been measured in hypertensive as well as normotensive women on oral contraceptives.

Evidence Against Defective Feed-Back

Additional evidence against the defective feedback theory is found in the work of Beckerhoff et al who found that plasma renin concentration was decreased in both hypertensive patients and normotensive patients on oral contraceptives[103]. These authors found that a more profound suppression of plasma renin concentration was associated with a reversible hypertension. Weit and Laragh also found no consistent difference in plasma renin concentration between normotensive and hypertensive oral contraceptive users[77,89]. In addition, Weir found no increase in angiotensin II in normotensive or hypertensive patients on anovulatory steroids[89]. It is thought that apparent inconsistencies in the measurement of plasma renin concentration results from variations in the assay methods between investigators, particularly the species of origin of the substrate.

Laragh and co-workers have proposed that oral contraceptive hypertension may more closely resemble mineralocorticoid hypertension, with an absolute or relative substrate induced excess of plasma renin activity relative to an induced state of volume expansion[77]. Hypertension would thus result when a women was unable to compensate for the excess substrate and volume with suppression of her renin secretion. There are several possible mechanisms for increased volume. One would be through increased aldosterone but again the data supporting this is contradictory. Plasma aldosterone was found to be elevated in normotensive women on oral contraceptives by Beckerhoff et al[107]. However, no increase in plasma aldosterone was demonstrated by Katz[108] or Weir[89] in normotensives. Weir did find a slight increase in hypertensive oral contraceptive users but this was not statistically significant. The volume expansion may be caused by estrogen. Thorn reported in 1938 that estrogens cause sodium retention[109]. Preedy found that estrogens depressed urinary sodium excretion in humans[110].

Catt has proposed two other possible factors in the development of hypertension in susceptible women[111]. Hypertension may develop only in those women who have a renal lesion that prevents them from responding to a vasoconstrictor induced increase in pressure with the normal pressure induced diuresis described by Guyton[112]. Alternatively, he proposed that there may be an abnormal metabolism of angiotensin. These theories have not as yet been investigated. It has been shown however that increased sodium balance causes a greater pressor response to angiotensin II in man[113].

Another possible contributing factor to increased blood pressure would be an increase in cardiac output. Walters and Yin reported a mean increase in cardiac index of 0.64 1/min/m^2 and a mean increase in stroke volume of 20.06 ml using a photoelectric dye dilution technique[114]. Using the more sophisticated technique of radiocardiography, Letoverta found a mean increase of 0.23 1/min/m^2 in

cardiac index and an increase in stroke volume of 7 ml. He also measured total blood volume and found an increase of 300 ml[115]. However, thus far there is no study correlating the magnitude of increase in blood pressure with the magnitude of increase in cardiac output or plasma volume[95].

A final proposed mechanism for oral contraceptive pill hypertension is through increased sympathetic activity. Rockson et al have reported that plasma dopamine beta hydroxylase activity, an enzyme thought to be an index of sympathetic activity, is increased in women who develop hypertension on the pill[116]. They interpreted this as a lack of reflex reduction in adrenergic activity in response to increased arterial pressure. A significant change in dopamine beta hydroxylase activity was not found in women who remained normotensive on the pill. These results need to be confirmed with other studies.

In summary, although considerable debate continues in the literature, most evidence points toward an association of oral contraceptives with both thromboembolic disease and hypertension. An increased incidence of deep vein thrombosis and stroke was found in both retrospective studies and the prospective study by the Royal College of General Practitioners, although this was not found in the Peurto Rican study. At the very least, it can be said that women who smoke should be told that smoking combined with oral contraceptive use greatly adds to the risk of pulmonary thromboembolic disease and strokes. Also women who develop transient ischemic attacks or vascular headaches should discontinue oral contraceptives.

Recent evidence from retrospective studies, mortality statistics and specific angiographic lesions suggest an increased risk of myocardial infarction. Women who have other established risk factors for ischemic heart disease, particularly if they are over 40, should be encouraged to use another method of contraception.

An increase in blood pressure occurs in all users of oral contraceptives, with overt hypertension developing in 5%. It is important to consider oral contraceptive hypertension in any young women who presents with hypertension. Those patients who use oral contraceptives should have their blood pressure checked on a regular basis.

The risk of thromboembolic disease, although small, and the universal increase in blood pressure, as well as other side effects associated with other organ systems, suggest that the use of oral contraceptives should be limited to those women who have found other methods of contraception unacceptable, rather than accepted as the method of choice. ●

(References available on request.)



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Negotiations Workshop November 19-20

By George D. Oetting, Ed.D.
Director of Education

MASA will conduct a two-day workshop on negotiations at Lake Guntersville Nov. 19-20.

Today, physicians, individually and collectively, are facing problems they never had to face before. These problems call for considerable skill in the art of negotiating.

This skill is required because of the changes in private practice. Medical care used to be a private matter between the patients and his physician.

Today, in order to maintain a relationship with his patients, a physician is compelled to relate to federal and state governments, to hospital governing boards and administrators, to insurance carriers, to his peers and to his consumers in terms of some type of review of his medical practice.

After World War II, the federal government started becoming involved in payment for private health care. Then in 1965, the Social Security Amendment enacted Medicare and created utilization review committees. And that was only the beginning. Since then, each Congress has passed legislation affecting the physician practice, some of it drastically.

Disagreements are increasing between hospital governing boards and the medical staff. One major difficulty concerns the rules under which the medical staff operates in the hospital. Some physicians feel their activities are being controlled more and more by the hospital rather than the medical staff organization. Hospital-based physicians are finding it more and more difficulty to negotiate satisfactory contractual agreements.

Many of these problems may be able to be resolved through careful and thoughtful negotiating. Unfortunately, right now, many physicians are not very well trained in negotiation skills. Everyone he deals with – be it hospital administrators, hospital boards, government agencies, insurance carriers, other third parties, or consumer groups – is better equipped by training and experience to negotiate. That is why it is important for physicians to understand the art of negotiating.

To meet this need, MASA and the American Medical Association are sponsoring a special workshop for physicians. AMA staff personnel with extensive experience in negotiations will conduct seminars, discussions and actual practice sessions to help MASA physicians develop and improve their negotiating expertise.

Check the *Alabama M.D.* for further details and registration information on the Nov. 19-20 workshop at Lake Guntersville.

***

The following is a calendar of conferences and programs, compiled by the Education Department, which may be of interest to members. ●

CME CALENDAR

OCTOBER 3-4
"Tennessee Valley Medical Assembly," Chattanooga & Hamilton County Medical Society, Inc., Chattanooga Choo Choo, Convention & Concert Hall, Chattanooga, TN, Fee: $75. Approved for Category 1 Credit. Contact Tennessee Valley Medical Assembly, 960 E. Third St., Chattanooga, TN 37403.

OCTOBER 7
INTERNAL MEDICINE, Sixth Annual Internal Medicine Symposium. Knoxville Society of Internal Medicine & Dept. of Medicine, Wood Memorial Auditorium, Univ. of Tenn. Memorial Research Center & Hospital, Knoxville, TN. Acceptable for Category 1 and AAFP prescribed hours. Contact Dr. Harvey L. Goodman, Director of CME, Univ. of Tenn. Center of Health Sciences, 1924 Alcoa Hwy., Knoxville, TN 37920.

OCTOBER 7-8
Southeastern Regional Meeting, American College of Physicians, Univ. of Miss. School of Medicine, Jackson, Miss. Contact: Thomas M. Blake, M.D., F.A.C.P., University Hospital, Jackson, Miss. 39216. Approved for Category 1 Credit.

OCTOBER 12-13
EMERGENCY MEDICINE, Tri-Regional Emergency Medical Services Workshop. South Carolina Medical Association, S. Carolina Dept. of Health & Environmental Control, Health Services Administration, DHEW, U. S. Public Health Service. Wade Hampton Hotel, Columbia, So. Carolina. Fee $25. Applied for CME credit from Amer. College of Emergency Physicians. Contact Lee Shuck, Div. of Emergency Medical Services, 6525 Belcrest Rd., Ste 320, Hyattsville, MD 20782. (301) 436-6290.

OCTOBER 14-15
INTERNAL MEDICINE. Florida Regional Meeting of the American College of Physicians. American College of Physicians. Sarasota, Florida. Category 1 credit toward the AMA PRA. Contact Charles K. Donegan, M.D., 501-11th St., St. Petersburg, Fla. 33705.

OCTOBER 15-16
Alabama Heart Association Regional Workshop, "A Common Sense Approach to Ischemic Heart Disease & Hypertension," American Heart Association, Ala. Affiliate. Guntersville, Ala. Fee $25. 6 hours Category 1. Contact: Mr. Ron Kensey, Program Director, American Heart Association, 706½ S. 29th St., P. O. Box 31085. Birmingham, Ala. 35222.

OCTOBER 16-18
HEMATOLOGY, OB-GYN, "Cancer Concepts 1977". Univ. of Tenn. Center for Health Sciences, E. Tenn. Cancer Research Center, American Cancer Society. Sheraton Inn, Gatlinburg, TN. Contact Dr. Harvey L. Goodman, Director of CME, Univ. of Tenn. Center for Health Sciences, 1924 Alcoa Hwy., Knoxville, TN 37920.

OCTOBER 20-22
PEDIATRICS, ORTHOPEDIC SURGERY, "Pediatric Orthopedic Conference." Univ. of Tenn. College of Medicine, Clinical Education Center, Knoxville, Tenn. Sheraton Hotel, Gatlinburg, Tenn. Contact Dr. Harvey L. Goodman, Director of CME, Univ. of Tenn. Center for Health Sciences, 1924 Alcoa Hwy., Knoxville, TN 37920, (615) 971-3345.

NOVEMBER 2-3
THE USE OF STAPLERS IN SURGERY-WORKSHOP. UT College of Medicine. Chattanooga, TN. $100, advance registration required. Acceptable for credit on an hour-for-hour basis toward the AMA PRA. Contact LeRoy J. Pickles, CME Director, UT Continuing Medical Education, Suite 400, 921 E. Third St., Chattanooga, TN. 37403. Call (615) 756-3370.

NOVEMBER 6-9
Southern Medical Association, "71st Annual Scientific Assembly, SMA Postgraduate Courses. Southern Medical Association. Dallas Convention Center, Dallas, Texas. Fee varies for each course. Registration Deadline: Oct. 15. Acceptable for Category 1 credit. Contact Southern Medical Association, 2601 Highland Avenue, Birmingham, Ala. 35205.

NOVEMBER 10-12
Pulmonary Function: New Concepts & Techniques. Univ. of Kentucky & VA Hospital. Univ. of Kentucky Medical Center. Fee $275. 16 hours credit. Contact Frank R. Lemon, M.D., CME Director, Univ. of Kentucky, Lexington, KY 40506. (606) 233-5161.

NOVEMBER 10-12
DIAGNOSTIC RADIOLOGY FOR EMERGENCY & FAMILY PHYSICIANS. UT College of Medicine. Chattanooga, TN. $175, Nov. 1 deadline. 15 hrs. AMA credit. Contact LeRoy J. Pickles, CME Director, UT Continuing Medical Education, Suite 400, 921 E. Third St., Chattanooga, TN. 37403. Call (615) 756-3370.

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Griffiths, L. L., Brocklehurst, J.C., MacLean, R. et al. *Diet in Old Age*, Brit Med J., 1.739, 1966



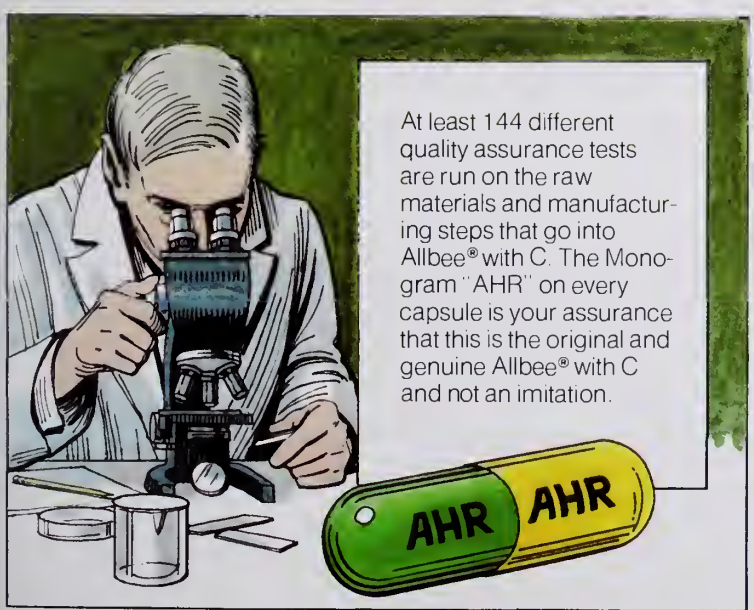
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Atropine sulfate	0.0194 mg	0.0194 mg
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Brief summary. Contraindicated in patients with glaucoma, renal or hepatic disease, obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy) or a hypersensitivity to any of the ingredients. Blurred vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur at higher dosage levels, rarely at the usual dosage.

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DIGEST—STATE COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health at its regular meeting on Aug. 17, 1977, took the following actions:

- Interviewed a physician with delinquent death certificates and he promised to keep these vital records current to avoid prosecution.
- Approved the allocation of 15-bed contract to Druid City Hospital in Tuscaloosa for TB treatment for the fiscal year beginning Oct. 1, 1977.
- Approved revisions to the Primary Drinking Water Regulations adopted Feb. 16, 1977, updating these regulations to comply with changes in the National Interim Primary Drinking Water regulations.
- Approved a salary adjustment for dentists in state clinics.
- Received a notice of public hearing on request to revise Alabama Medical Facilities Plan (Title VI).
- Approved initial issuance of Assurance of Need for eight facilities and considered the request of the Sick and Shut-in Nursing Home, Tuscaloosa, and disapproved this request as not consistent with the Medical Facilities Plan.
- Received information on the Certificate of Need Program exemption from enforcement provision. Heard requests from Fairhaven Nursing Home, Birmingham, for exemption from provisions of the Certificate of Need Act since their facility was already under contract. Also received a request from Estes Health Care Center, Forestdale, Birmingham, for permission for licensure of their facility, since construction was already underway when the Certificate of Need Law was adopted. Requested an Attorney General's opinion regarding exemption provision of the Certificate of Need Law.
- Renewed a request to the Secretary of HEW for a legal opinion regarding the legal status of community services requirement for facilities built under Hill-Burton Plans prior to Dec. 8, 1964.
- Received progress report on the formation of Health Department in District IV.
- Was advised that Dengue fever has been considered epidemic in Jamaica based on clinical symptoms and the identification of Type I dengue in that area.
- Noted the addition of Loperamide to Schedule V by the federal agency effective June 17, 1977. Since no adverse action has been taken by the state, this drug is automatically added to the Controlled Substances list effective July 17, 1977.
- Was advised by the State Health Officer that bids on the Clinical Laboratory have been opened and all bids and costs are approximately $2.5 million.

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Encephalitis Breakthrough

CONTINUED FROM PAGE 35

Work on the manuscript for *The New England Journal of Medicine* was completed in February of this year. The data was separately presented to the Society for Pediatric Research and the American Society of Microbiology.

In April, the New England *Journal* accepted Dr. Whitley's article as written and NIAID organized the press conference to make the announcement of the breakthrough simultaneously with that publication in early August.

Two Busy Scientists

The rest is history, although far from complete history. The phone is still ringing in the labs and offices of Dr. Alford and Whitley in Birmingham. And the research continues.

Dr. Alford has little time these days for his ongoing non-scientific project, rebuilding an old house for his wife and two children, ages 8 and 14. Plus which, he's smoking more these days, more than he knows is good for him.

Dr. Whitley, 32, doesn't smoke but he has less leisure than he would like to have to pursue his interests in growing orchids in his greenhouse, jumping horses, raising his 15-month-old son and, rarely, visiting the Gulf beaches. The research regimen over the years has kept both men busy, including many weekends and interminable nights that go on for 16 hours on occasion.

"I don't know why," Dr. Whitley said, "but patients enrolled in this study always seem to be admitted in the middle of the night."

Sometimes, their labs opened at dawn and work continued into the night.

They have had the valued assistance of many UAB colleagues in all the specialties, without whom the research would have been impossible. Suffice it to say that it was a team effort, not only at UAB but at the 21 other institutions.

The primary work was done in Birmingham because the necessity of internal control required at least a third of the patients to be under observation and treatment there.

The Road Ahead

Dr. Alford, as the senior researcher, summarizes:

"This is a beginning, a breakthrough as a scientific model to work with, not as a clinically useful compound. FDA requirements must be met before the drug can be licensed for other than experimental use.

"It's a breakthrough for science when you have something to work with. It's a clinical breakthrough when the physician has a new drug for treatment. That hasn't happened yet."

Both men are eager to have the understanding of Alabama physicians, some of whom may have potential patients for four categories listed by Dr. Whitley in his letter to the *Journal*. (Page 34.)

"We need to make physicians in the state cognizant of the fact that we are also studying neonatal herpes, and all the other studies," Dr. Whitley said.

"If there is a question about the diagnosis, we are perfectly willing to take those children at Children's Hospital. We'll work them up and we have no intention of taking them away from their private physician. We'll take care of them during their acute illness and we'll return them to the private physician.

"Patients with zoster: We're more interested in looking at immunocompromised patients at this point with lesions of less than 72 hours, but we'll take anyone with cancer who has zoster because we know that they can go on to dessimate and we hope, based on data we have so far, that we can provide a service for them even though we can't use them in the research program."

For full explanation, see his letter.

The Two-Man Team

Dr. Whitley, a New Jersey native, came to UAB via Duke and George Washington Medical School.

Dr. Alford, Birmingham born and reared, returned to his hometown after a stint in research at Harvard. He is a 1955 UAB medical graduate.

Although the speed and inflection of Dr. Whitley's eastern delivery sometimes seems out of phase with Dr. Alford's southern drawl, the two obviously work superbly together.

Of the "long road ahead" in viral research, Dr. Whitley said:

"We would hope that this work will inspire other investigators to get into the field of anti-viral chemotherapy because that's obviously something that is necessary in terms of human health needs." ●

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PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

DERMATOLOGY: Age 28; University of Alabama, 1974; seeking practice in town of 30,000 plus population. Available July 1978. LW-001.

GASTROENTEROLOGY/INTERNAL Medicine: Age 30; University of Virginia, 1973; National Board Certified; American Board Certified; Will be American Board Eligible 1978; seeking Single specialty group, Partnership or Multi-specialty group. Available July 1978. LW-08695.

GASTROENTEROLOGY/INTERNAL Medicine: Age 32; Jefferson Medical College, 1971; National Board Certified, American Board Certified; Will be American Board Eligible 1978; seeking Single specialty group, Multi-specialty group or Partnership. Available July 1978. LW-08438.

GASTROENTEROLOGY/INTERNAL Medicine: Age 29; Medical College of Georgia, 1973; National Board Certified, American Board Certified and passed Flex Examination; seeking Partnership, Multi-specialty group, Single specialty group, Institutionally based or Research. Available July 1978. LW-06624.

GENERAL PRACTICE: Age 35; University of Alabama, 1975; seeking practice in northern or central Alabama in town of 50,000 or more population. Available April 1978. LW-002.

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board Eligible 1978; National Board; Available July 1, 1978. LW-004

FAMILY PRACTICE: Age 30, Duke University 1968, interested in working with a family practice, general practice, or emergency room physician while serving a straight internal medicine internship at University of Alabama Hospitals in Birmingham during the period July 1977-June 1978. LW-005.

FAMILY PRACTICE: Age 26; University of Tennessee, 1974; American Board Certified; National Board; Will be American Board Eligible 1978; seeking practice in town of 5,000-50,000 population. Available February 1978. LW-006.

INTERNAL MEDICINE/RHEUMATOLOGY: Age 31; Ohio State University, 1972; American Board Certified; American Board Eligible; seeking Single specialty group, Institutional based or Multi-specialty group. Available July 1978. LW-09159.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board Certified; Will be American Board Eligible 1977; seeking Single specialty group or partnership. Available July 1978. LW-09526

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 30; University of Louisville 1973; seeking clinical practice. Available July 1978. LW-007.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking Single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 29; University of Alabama, 1973; American Board Certified; National Board; seeking Single specialty group in the Birmingham section. Available October 1977. LW-009.

INTERNAL MEDICINE: Age 43; Emory University, 1959; American Board Certified; seeking Single specialty group; School health or Institutionally based. Available November 1977. LW-09338.

OBSTETRICS & GYNECOLOGY: Age 55; St. Louis, 1947; American Board Certified; seeking School health; Institutionally based or Single specialty group. Available September 1977. LW-09399.

OBSTETRICS & GYNECOLOGY: Age 35; Chicago Medical School, 1968; Passed Flex Examination; American Board Certified; seeking Partnership, Single specialty group or Solo. Available September 1977. LW-09415.

OPHTHALMOLOGY: Age 30; University of Illinois, 1972; American Board Certified; National Board; seeking Single specialty group, Assistant or Associate in the Birmingham or Huntsville area or with a town of 100,000-250,000 population. Available July 1978. LW-010.

SURGERY: Age 32; Washington University, 1971; American Board Eligible; seeking Partnership, Single specialty group or Multi-specialty group. Available July 1978. LW-09077.

SURGERY: Age 31; University of Alabama, 1973; National Board Certified; Will be American Board Eligible 1978; seeking Partnership, Single specialty group, Solo or Multi-specialty group. Available July 1978. LW-07827.

SURGERY/UROLOGICAL: Age 42; University of Miami, 1963; National Board Certified; American Board Certified; seeking Partnership, Solo or Single specialty group. Available September 1977. LW-09726.

ORTHOPEDIC SURGERY: Age 32; Medical College of Georgia, 1971; Will be American Board Eligible 1978; seeking Single specialty group, Partnership, Industrial or Institutionally based, or solo. Available January 1978. LW-06158.

SOPHOMORE Medical Student—age 22, interested in a town or hospital assisting with medical school costs in return for service there in general/family practice. Available 1980. LW-01.

PHYSICIANS WANTED (Opportunities for Practice)

GENERAL PRACTITIONER Wanted—Town of 6,000 population, trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities

PHYSICIANS WANTED (Continued)

include golf course, country clubs, tennis courts. PW-7

GENERAL PRACTITIONER—Opportunity in central Alabama town of 5,000 population with a trade area of 30,000 population, with a trade area of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER'S 2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-5

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 4500 population. Within 17 miles north of Montgomery, Alabama. The finest recreational areas in Alabama consisting of 2 large lakes. Newly expanded 69 bed hospital with 8 active staff members. Invitation to visit with expenses paid will be directed to those qualified. PW-9.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11

GENERAL PRACTITIONER'S—2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-12

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital privileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14

WANTED—Primary Care Physician, Board Eligible or Board Certified Family Practitioner or Internist, to join well established group of three physicians in West Central Alabama town of 30,000 population, with a trade area of approximately 200,000 population. Small town advantages with big city conveniences. Modern 150-bed accredited hospital. Excellent opportunity to participate in local family practice residency program. Salary negotiable leading to full partnership. Fringes included. Attractive living area with excellent schools, churches and cultural activities. Unlimited recreational activities; golf, tennis, water sports, camping facilities, hunting, fishing. PW-15.

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HEALTH THROUGH EDUCATION WORKSHOP SEPTEMBER 28-29

School has begun and summer is now a short, pleasant memory. Auxiliary members across the state, from Colbert to Houston County, are busy assisting in eye and hearing screening school programs. They are also preparing to come to Montgomery.

September 28th and 29th, the Medical Association of the State of Alabama building will be overflowing with auxiliary members from all points in Alabama. Mr. Conner and his MASA staff have graciously aided us in planning our Fall Board meeting and workshop. The midtown Holiday Inn, Montgomery, will be our lodging and dinner site.

Dr. John Rice, MASA President, will be the featured speaker at the opening workshop session Wednesday, September 28, 7 p.m., during dinner, at the Holiday Inn. His title is "A Member of The Club." Dr. Rice will show a film depicting the pressures from within and from outside upon medical marriages and families. All area physicians and spouses are invited.

Thursday, Sept. 29, at the MASA building the "Health Through Education" workshop will continue. Beginning at 9 a.m., health education plans and action will be discussed by a distinguished panel of educators and professionals.

Dr. Wayne Teague, State Superintendent of Education, Dr. Ken Blankenship, Department of Education, and Dr. Mable Robinson, Health Education Specialist, State Depart. of Education, will provide an in-depth study of the state board health education resolution and commitment, then discuss what comprehensive health education is. Dr. Robinson will also show the excellent film on mental health, "A Cipher In The Snow."

Mr. Ron Kensay, program director, American Heart Association, Alabama Affiliate, will tell about the State Education Department's resolution on CPR and plans for teaching CPR in schools.

Dr. Willis Baughman, Coordinator of Graduate Studies, Health, Physical Education, and Recreation Department, University of Alabama, will tell how the Health Education Curriculum Guides have been updates and will be utilized in schools. Then Dr. Richard Means, Health Educator, Department of Health, Physical Education and Recreation, Auburn University, will discuss the work of the Coordinating Committee on Health Education, and plans for implementation of health education.

Mrs. O. B. Carr Jr., Auxiliary Health Education chairman, will give the Auxiliary's response. She will reveal plans for four district workshops on Health Education Action. These November workshops will be jointly sponsored by the State Department of Education, the state PTA, and the Auxiliary. School superintendents, school principals, district legislators, Auxiliary and P-TA members will be invited and urged to participate.

Mr. Richard Whitaker, Legislative Affairs, MASA, and Mr. John Mooresmith, Legal Counsel, MASA, will advise us about effective legislative efforts and discuss a health education model bill. Mr. William McDonald, MASA Communications Director, will share communication techniques to promote broad support and action for health education.

To complete the workshop, Dr. and Mrs. Arthur Stamler will present slides to the Guatemala International Health Project during a box luncheon.

Letters about this timely workshop will be sent to every medical society in the state. Urge your spouse to attend this meeting. If there is no organized Auxiliary, $11 will enable her to become a member-at-large. Health education is a vital need for Alabama, and as physicians' spouses, we can set a unique example. We have the opportunity to stand up and to be heard, possibly, as both Auxiliary and P-TA members. Ten dollars to Mrs. Joe Keith, Fall Conference chairman, Rt. 1, Box 38-Z, Pike Rd., 36064, will reserve a place for workshop meals.

Last year the P-TA and AMA jointly issued resolutions urging that a unified comprehensive health education curriculum taught by qualified teachers be implemented into our schools, grade K-12. With PTA state officials and school nurses, we have met and pledged to make the public aware of the need for health education, to become involved, informed ourselves, and to encourage training of teachers to teach health education.

We don't have a catchy slogan, like "Save the Children," although a good health education foundation might save a child or an adult. No, we're saying, "Support Health Education in Alabama Schools," so that health can become a personal responsibility.

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SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital, the alcohol content is 15%.

See next page for brief summary.

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Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

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Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

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Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lh body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

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WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

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GENERAL PRACTITIONER, company physician, needed in North Alabama and Portland, Oregon. (Two positions) Employee physicals, emergency treatment on site. Staff facilities at plant. Occupational medical experience desirable. Company is third largest in world in sales—$2 billion last year. Ranks no. 90 on FORTUNE'S list of top 500. No malpractice to deal with. Need is time-critical. Interested physicians may call Mr. Wooley, Pensacola, (904) 434-1161.

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30. Nahmias AJ, Shore SL, Del Buono I: Diagnosis by immunofluorescence of human viral infections with emphasis on herpes simplex viruses, Viral Immunodiagnosis. Edited by E Kurstak, R Morisset. New York, Academic Press, 1974, pp 157-172.
31. Johnson RT, Olson LC, Buescher EL: Herpes simplex virus infections of the nervous system: problems in laboratory diagnosis. Arch Neurol 18:260-264, 1968.
32. Lerner AM, Bailey EJ, Nolan DC: Complement requiring neutralizing antibodies in Herpesvirus hominis encephalitis. J Immunol 104:607-615, 1970.
33. Lerner AM, Lauter CB, Nolan DC, et al: Passive hemagglutinating antibodies in cerebrospinal fluids in herpesvirus hominis encephalitis. Proc Soc Exp Biol Med 140:1460-1466, 1972.
34. Ross AH, Julia A, Balakrishnan C: Toxicity of adenine arabinoside in humans. J Infect Dis 133: Suppl:A192-A198, 1976.

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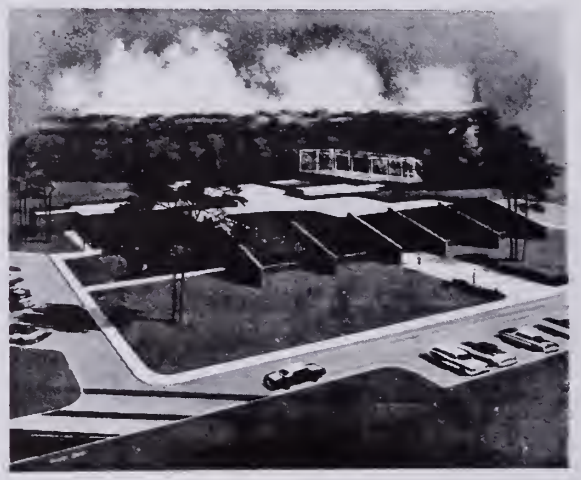
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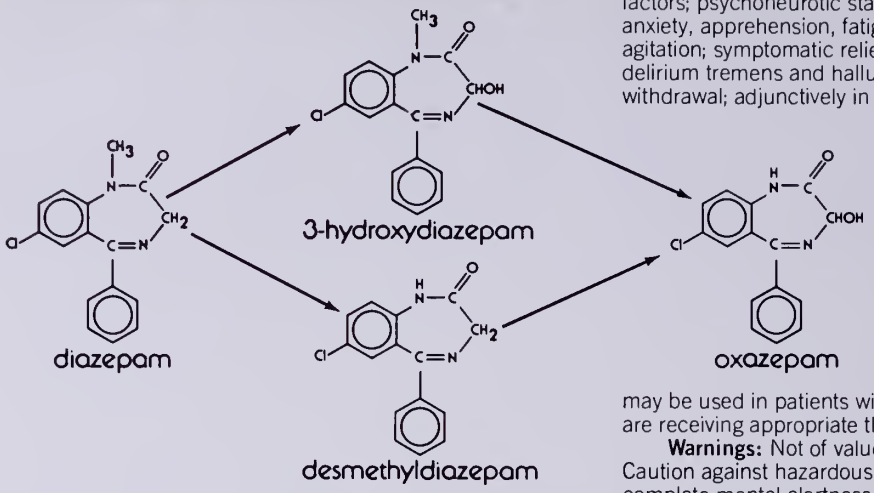

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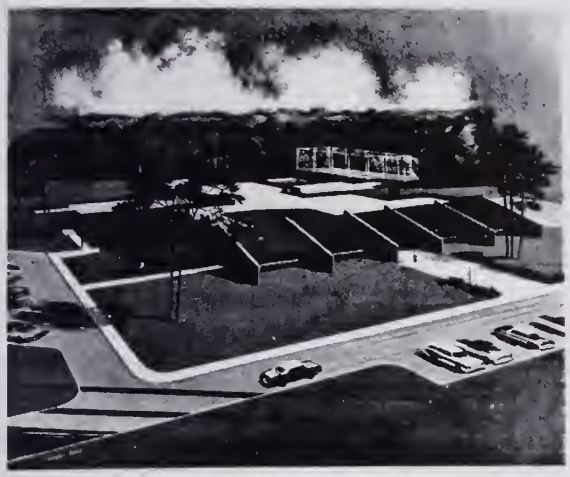
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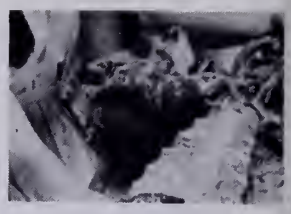
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*At Large

STATE HEALTH OFFICER: Ira L. Myers, M.D., Montgomery.



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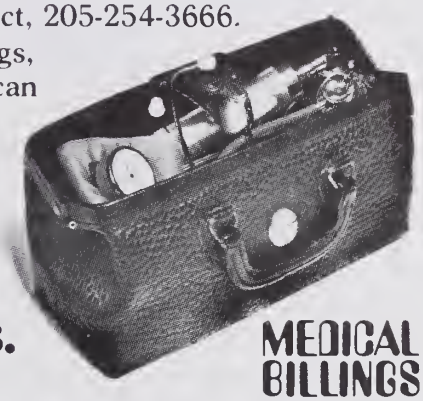
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Manuscripts should be typewritten, double spaced on white paper 8½x11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual,* published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost ($6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost ($1.65) from MASA.

Final authority on grammar is Webster's *New International,* Unabridged, Second Edition.

Copy Changes: When an author receives a galley proof back from MASA, he is expected to make corrections only. Copy changes, alterations on proof from the original manuscript, are expensive. Please try to say what you mean in the original.

Length of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

Reprints: Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama,* P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

19 VIEWS

This month the *Journal* is initiating two new features—make that three—that should be of interest to Alabama physicians.

An example of the first you have already seen: The cover is a photographic copy of a decorated page from a medical book that dates back before the time of the discovery of America by Columbus. Celsus' *De medicina,* published in 1478, is among more than 7,000 rare books in the priceless Reynolds collection, housed on the ground floor of the Lister Hill Library of the Health Sciences, UAB.

An account of the remarkable life and times of the physician from Ozark, Ala., who assembled this authentic treasure house of medical science and history, may be found on page 6.

More pictures from the Reynolds collection will be forthcoming in subsequent issues. Also to continue are photographs and other extracts from the state's own medical archives adjoining the Reynolds collection — the Alabama Museum of the Health Sciences.

And thereby hangs a plug. Mrs. Sarah C. Brown, Lister Hill Library director, welcomes additions to the museum: photographs, letters, vintage medical equipment — anything that bears on the rich medical heritage of Alabama. The photograph of the Mobile Medical College football team of 1905, found on page 56, illustrates the point: *anything* that bears on Alabama medicine.

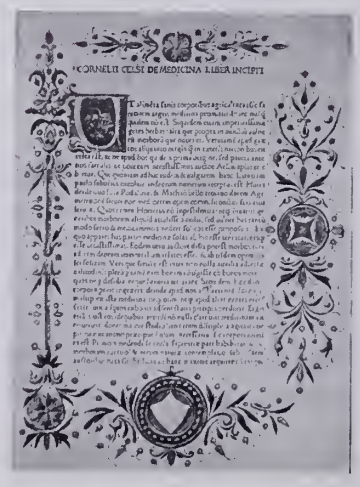
Material may be sent to this address: Lister Hill Library, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.

Also this month, the *Journal* is beginning a series on prominent leaders in Alabama medicine, aware that this too is history, contemporary history. The inaugural article, on Leon C. Hamrick, M.D., Medical Director of Lloyd Noland Hospital and chairman of the Board of Censors, will be found on page 14.

Since we do not know where any of these new features will lead, join us for the ride in this and subsequent issues.

Finally, we have a new *Journal* nameplate this month, approved by the Board of Censors. We hope you like it.

S. Lon Conner
Executive Director



ABOUT THE COVER
Color photograph by William H. McDonald; Color process printing by Wayne Mainor—both of MASA.



Standards Of Care

On Oct. 29, I spoke by invitation to the East Alabama Health Foundation Planning Retreat. It was my advance understanding that the audience would likely include some who believe that nurse practitioners are the answer to whatever problems face us in Alabama.

The following, greatly reduced for this space, is the essence of what I told them:

A considerable amount of what has been and what will continue to be essential to health care delivery is based on skills which can be taught with relative ease without profound understanding of the underlying patho-physiology or psycho-dynamics.

This intriguing prospect was first put into motion by the intensive study of what physicians do and how they do it and by designing educational programs that train a physician's assistant to gather useful information and perform important functions in an office or hospital setting that saves physician time and frees the physician from much of the tedium, repetition and pressure that prolonged his day and shortened his life.

I have been working with a physician's assistant for just over five years and I can assure you that this is an effective and productive way to extend physicians' services. The physician and the physician's assistant must clearly understand that the objective is to provide professional services. It is proven, it is documented, there is no question about it.

Medicare and Medicaid have placed heavy additional burdens on Alabama physicians. The ranks of physicians in this state have swelled from 2,400 in the 1970s to 3,100 and are still increasing. But there were 320,000 Medicaid recipients alone in Alabama in fiscal 1976 and this has taxed our health care system.

The Department of HEW is casting about to find a second level of medical care. *If this happens, the U.S. will be the first developed nation in the world to do it.*

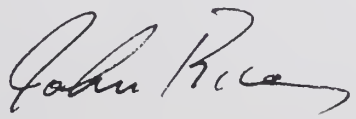
Political expediency, growing out of a "crisis" created by the government itself, should not be allowed to destroy the standards of professional care that derive directly from Alabama's first Medical Practice Act, adopted four years after statehood, in November 1823, and signed into law by Gov. Israel Pickens.

The wisdom of the act has survived more than a century and a half of vast changes in medicine and society. It simply states:

"That from and after the first day of April next no person shall be allowed to practice physic or surgery, or any other branches thereof, or in any case to prescribe for the cure of diseases for fee or reward, unless he shall have first been licensed to do so, in the manner prescribed."

Today, 154 years later, the same challenge faces the people of this state that faced those founding fathers in 1823, aware as they were of the willingness of many to supply the popular demand to dilute and thus destroy medical practice. That challenge, now as then, is this:

Is professional medical care the standard which will prevail?





Dr. Lawrence Reynolds, center, in the place of honor among his treasure trove of rare medical books in the Reynolds Historical Library, ground floor of the Lister Hill Library of the Health Sciences, UAB. This scene greets the visitor to the Reynolds collection. Right: A general view of the quiet, graceful rooms housing the Reynolds Historical Library. Priceless medical books dating back to the early 1300s are in the shelves. Note the Freon gas jets in the ceiling, left center. If the smoke detectors (three are visible) sense trouble, the room can be flooded with fire-quenching Freon quickly, leaving only enough oxygen for human survival for about three minutes. Conventional sprinklers would, of course, destroy the precious books almost as effectively as fire.

An Alabama Treasure

The Reynolds

The cover of the *Journal* is a photographic copy made by a MASA staff member of an exquisitely decorated page from *De medicina,* by Aulus Aurelius Cornelius Celsus (25 B.C. - 50 A.D.).

The Celsus book, edited by Bartholomaeus Fontius and printed in Florence in 1478, was one of the first medical books set in type.

It is from the priceless collection in the Reynolds Historical Library, Lister Hill Library of the Health Sciences, University of Alabama in Birmingham.

Like all books in the Reynolds collection published before 1500 (or 1501, as some would have it), the Celsus is classified as "incunabula," from the Latin: cradle, birthplace, origin.

Some of the books in the Reynolds collection go back to the previous century, the 14th, but the Celsus is esteemed for its beauty and the fact that it does date from the very beginnings of the printing press. (Johannes Gutenberg, generally considered the inventor of moveable metal type, died 10 years before the Celsus was printed. Columbus discovered America 14 years after its publication.)

The Reynolds collection bibliography, almost 500 pages in length (and still incomplete) lists 29 incunabula among the more than 5,000 books and papers in the original catalog. Since 1958, contributions have brought the collection to some 7,000 items.

The collection is now housed in a spacious, quiet, carpeted room on the ground floor of the Lister Hill Library. Before the new building was completed two years ago, the books were in their own small building, dedicated in 1958. When the late Lawrence Reynolds, M.D., physician, scholar and philanthropist, gave them to the University of Alabama, the collection was being coveted by many universities.

The collection was moved to its present location in October 1975.

No realistic value can be attached to the Reynolds library; some of the books and papers are simply beyond

Historical Library



price. There is, for example, a handwritten letter from Pasteur, describing his rabies work; Pliny's *Natural History* from the 16th Century; several of George Washington's letters; and so on.

Born Near Ozark, Ala.

The collection, in sum, comprises the recorded history of medicine. It is almost certainly the most valuable owned by one individual in the world. And who was Dr. Reynolds, this man who, for half a century, put together such a monumental collection?

He was born in Skipperville, near Ozark, Ala., Feb. 11, 1889. He was the eighth of nine children of Dr. Robert Davis Reynolds Sr., a practicing physician of that community, and of Mary Frances Card. Two of his brothers, John Leonard Reynolds and Robert Davis Reynolds Jr., also became physicians.

After graduation from Ozark High School in 1907, he attended the University of Alabama, graduating in 1912. In the fall of that year, he began his medical school training at Johns Hopkins Medical School.

He had already come to love reading and medicine as the "eyes" for his blind physician-father, a Confederate veteran who admired classical literature and the writings of such contemporary medical giants as Sr. William Osler.

When young Lawrence entered Johns Hopkins, his father presented him with four medical books of historical interest. The seed of what was to become a lifelong passion had been planted.

After finishing Johns Hopkins, he served in France as a Captain in the Army Medical Corps. Following World War I, he was appointed Instructor in Roentgenology at Johns Hopkins, later serving in the same position at Peter Brent Brigham Hospital in Boston. There, he became a friend of Dr. Harvey Cushing, who was at the time writing his great biography of Sir William Osler.

Dr. Reynolds saw some of the biography in manuscript and was captivated. As it happened, Dr. Cushing was also a book collector, further stimulating Dr. Reynolds' interest.

First Book Purchase

His first acquisition in rare medical books was the second edition of Verasalius' *Fabrica*. It cost him $600, at a time when his monthly salary was $250. The volume is in the present collection at UAB.

Dr. Reynolds once said:

"During my association with Dr. Cushing, my library grew in the acquisition of some choice editions. As the years went by, and my earnings increased, my interest in book collecting became an obsession. Being a bachelor, I could indulge this hobby to

CONTINUED ON PAGE 56

Two Comments

Editor, The Journal

In a recent Medical Grand Rounds, "Tuberculosis Prevention and Treatment" (J Med Asso Alabama 46: 27-34 [April] 1977), I was surprised that no mention was made of the failure of patients to take their medications as being the major factor in total treatment failure.

A patient who stops taking his medication permits a relapse. Re-treatment then fails because of the emergence of resistant strains.

(Of the greatest importance is not only an adequate understanding of recent advances in tuberculosis therapy, but also the patience and time required to educate the patients about his illness.)

In our jungle medical center we treat an average of 188 cases of pulmonary tuberculosis yearly. All our patients have been treated as outpatients with a cure-rate of 95%!

I attribute this excellent cure-rate to an intensive educational program which motivates patients to religiously take their medications even though they may no longer feel ill.

If pulmonary tuberculosis is ever to be irradicated in Alabama, physicians will have to imitate their brother-physicians in underdeveloped countries and motivate their patients to take their medications throughout the long treatment period.

Second Comment:

The May, 1977 issue of the *Journal* carried an advertisement for Tylenol (acetaminophen - McNeil) on page 45 which contains several important errors as regards the references to Goodman, L.S. and Gilman, A., eds: *The Pharmacological Basis of Therapeutics,* Fifth Edition, New York: Macmillan, 1975.

The first reference is to page 335:

The advertisement states: "Children who are dehydrated (due to fever, diarrhea or vomiting) are particularly prone to aspirin toxicity, even at therapeutic doses."

Goodman and Gilman actually state: "Children with fever and dehydration are particularly prone to intoxication from relatively small doses of salicylate."

Note that Goodman and Gilman do *not* state that therapeutic doses of aspirin will cause toxicity.

The second reference is to page 336:

The advertisement states: "This is of special concern in infants and young children where repeated therapeutic doses of aspirin can cause severe metabolic disturbances."

Goodman and Gilman actually state: "The most severe metabolic disturbances occur in infants and very young children who have become intoxicated as the result of therapeutic overdosage for some febrile illness, usually a minor respiratory infection..."

Goodman and Gilman point out that it is therapeutic *overdosage* that leads to intoxication, while the McNeil advertisement states that it is the therapeutic dose which leads to intoxication.

Thomas Brown, S.D.B., M.D.
Medical Director
Centro Medico 'San Jose'
Taisha (Morona-Santiago)
Ecuador

Vitamin Intake Controversy

The Editor, The Journal:

After reading the article the "'Ideal' Daily Vitamin C Intake" by Drs. Cheraskin and Ringsdorf in the June 1977 issue of the *Journal* of the Medical Association of the State of Alabama, we felt that some comment was appropriate.

Because of highly controversial nature of the required intake of vitamins, especially Vitamin C, several points should be made regarding this particular article. The statement that the authors make regarding the RDA is that it is designed to protect against classical scurvy. This is certainly an incorrect interpretation of the RDA which actually reads as follows:

"The recommended dietary allowances are the levels of intake of essential nutrients considered, in the judgment of the Food and Nutrition Board on the basis of available scientific knowledge, to be adequate to meet the known nutritional needs of practically all healthy persons.[1]"

Thus the use of the term "ideal" is a poor choice of words referring to nutrient intake when used in this context.

The methodology that the authors used is subject to some comment. The actual methodology is quite sketchily summarized but it would appear that all information was gathered on the basis of a food frequency questionnaire. This type of instrument when used alone to gather data is adequate for group surveys, but it is very insensitive for estimation of individual nutrient intakes.[2] The article gives exact milligram figures for Vitamin C intake. Using this type of instrument, these types of very exact numbers may not be realistic.

This was then compared with the Cornell Medical Index Questionnaire and given to a large group of dentists and their wives. The selection of this subject group given a self-administered questionnaire certainly presents results which are not generalizable to any other population. They are highly health conscious, well-educated and will not provide a base for generalization of results.

In conclusion, we would like to point out that it is not what the authors state in the article as much as what they do not state. The casual reader or the person who is not knowledgeable in the science of nutrition (and unfortunately this applies to many physicians) very likely might be left with the impression that this very exacting scientific research shows that Vitamin C intake should be increased dramatically for improvement of general health.

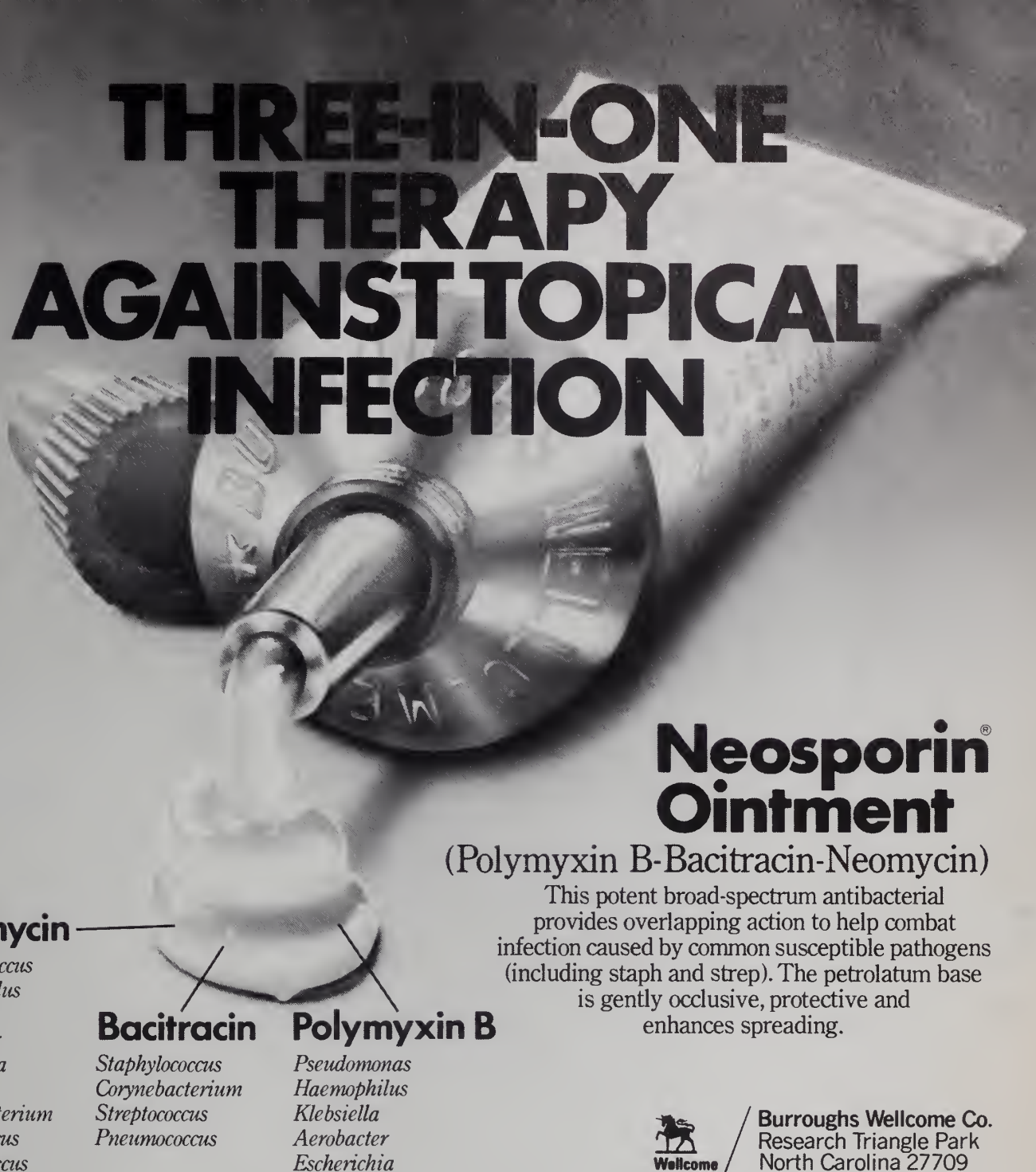
It is our feeling that this conclusion is entirely unwarranted based on the information presented in this article.

Terence R. Collins, M.D., M.P.H.
Kathleen Stitt, M.S., Ph.D.
University of Alabama
College of Community Health Sciences
Box 6291
University, Ala. 35486

REFERENCES

1. Recommended Dietary Allowances, 8th Revised Edition, 1974 Food and Nutrition Board National Academy of Sciences.
2. Burk, M., Pau, E. Home Economics Research Report, No. 40, U.S.D.A., p. 69, Nov. 1976.

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WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



When choosing a diuretic for day-in-day-out hypertension control with comfortable compliance...

The agent you choose in mild to moderate essential hypertension should offer (1) long-term effectiveness, (2) patient comfort, and (3) compliance.

Zaroxolyn offers all three.

Effectiveness: In several long-term studies[1,2,3] Zaroxolyn brought moderately elevated blood pressure (average 167/113 mm Hg) down to the range of normotension—and held it there for up to four years.

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Overall compliance with Zaroxolyn is good—very good. An analysis of controlled clinical studies involving 188 Zaroxolyn patients showed that only eight discontinued therapy because of side effects. That's a discontinuation rate of only 4.3%, and broader clinical experience appears to substantiate this low rate.[3]

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once-daily antihypertensive diuretic

Recommended initial dosage in mild to moderate essential hypertension–2½ to 5 mg once daily

Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents. Also, edema associated with heart failure and renal disease. **Contraindications:** Anuria, hepatic coma or precoma; allergy or hypersensitivity to Zaroxolyn. Or, as a routine in otherwise healthy pregnant women. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of childbearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur in edematous patients in hot weather. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg, edema of renal disease—5 to 20 mg. Dosage adjustment may be necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg

References:

1. Dornfeld L, Kane R: Metolazone in essential hypertension: The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18**:527-533, 1975
2. Cangiano JL: Effects of prolonged administration of metolazone in the treatment of essential hypertension. *Curr Ther Res* **20** 745-750, 1976
3. Data on file: Medical Department, Pennwalt Prescription Products

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WASHINGTON, Aug. 26, 1920—



Social Security Bill Is Signed; Gives Pensions to Aged, Jobl

Roosevelt Approves Message Intended to Benefit 30,00 Persons When States Adopt Cooperating Laws–He C the Measure 'Cornerstone' of His Economic Progran

WASHINGTON, Aug. 14, The Social Security Bill, pro a broad program of unemplo insurance and old age pe and counted upon to benefi 20,000,000 persons, became l day when it was signed by dent Roosevelt in the prese those chiefly responsible fo ting it through Co[illegible].

Mr. Roosevelt cal[illegible] the m "the cornerstone [illegible] str which is being [illegible] me[illegible]s c[illegible]ple[illegible] di[illegible]

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today, 94 to 0, and sen[illegible]

TRUMAN CLOSES TED NATIONS CONFEREN ITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

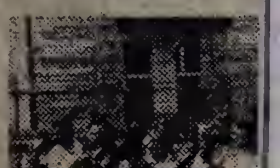
The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can be in history!"

IGNI

the Draf Ends No

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the



PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST. N. W. WASHINGTON, D. C. 20005

By WILLIAM H. McDONALD

This is the first in a series of pro

From Talking Rock To Lloyd Noland

"Is that the way they used to do things in Talking Rock, Leon?" asked the smiling urologist with the natty mustache.

Those around the table in the staff dining room of the famed Lloyd Noland Hospital in Fairfield grinned and chuckled.

It was an insider's joke at the expense of the Medical Director, Leon C. Hamrick, M.D., who was born Nov. 11, 1925, near the tiny hamlet of Talking Rock, Ga., "out on Route 2."

Dr. Hamrick joined the laughter. Obviously, the little joke was often repeated.

Blue Ridge Beginnings

Leon C. Hamrick attended the local schools of Pickens County, 70 miles North of Atlanta in the "foothills" of the Blue Ridge Mountains. ("Well, not exactly the foothills. The highest mountain in the county is 3,000 feet above sea level.") He was graduated from high school (in an 11-year program then in effect) at 16. Even then, he wanted to go to medical school, but lacked the means.

"The time I finished high school, I really had no money at all. A lady came through from Piedmont College, in Demorest, and said you can go to school — room, board and tuition — for $200 a year."

Recalling that, Dr. Hamrick laughs somewhat painfully: "I couldn't raise 50 cents at the time."

With the great war on, he also wanted to join the Navy, but, at 16, he was too young. The only option open to him was to go to work in Atlanta. His father bought his bus ticket, saw him off to the big city, wished him well and shook hands. Young Leon was on his own.

For a year he worked in Atlanta at various jobs; as a stock clerk, an assorter of cellophane (for wrapping cigar boxes and in other uses), as a mail clerk.

The year passed.

The Sea Beckons

Soon after enlisting in the Navy in 1943, he asked to be placed in the Hospital Corps, his interest in medicine still burning brightly.

Boot camp at Pensacola was all of 17 days. After he had finished, he and a new-found friend, Howard Foshee of Birmingham, who was also interested in becoming a Pharmacist's Mate, went to see the medical office, who told them:

"Ya'll come over and strike ("striking," in somewhat oversimplified Navy parlance, means setting your cap for a particular trade) and I'll send you to Corps school."

For some six weeks, they followed orders, but nothing was said about Corps school. Curious, they went back to the medical officer, who told them they didn't need to go to the school:

"I'm going to transfer your rate from Seaman Second (Second Class, roughly equivalent to Private First Class) to Hospital Apprentice."

The medical officer was as good as his word. They were transferred to the mainside hospital, where they stayed a few weeks.

Once, when a visiting Admiral, a medical officer, was scheduled to make an inspection, Hospital Apprentice Hamrick was put in charge of the diet kitchen in the dispensary at outlying Corey Field.

He was instructed to make the diet kitchen shipshape and to answer all the Admiral's questions.

When the dreaded day arrived, the Admiral (from Charleston, as Dr. Hamrick recalls) asked him:

"How do you sterilize dishes?"

"With boiling water, sir."

Very well. But before going out, the Admiral picked up a salt shaker from a shelf and asked Hospital Apprentice Hamrick from Talking Rock:

"Do you wipe these off after every meal?"

"Yes, sir."

"That's right. Say so whether you do or not."

When the Admiral had departed, Hamrick looked at the salt shaker for the first time and still quakes when he recalls:

"There must have been a thousand thumb prints on it."

Off To The Invasion

About this time, the Navy put up a draft for overseas duty. Young Hamrick, eager for action, signed up, and was promptly dispatched to the amphibious Navy, with the specific assignment of aiding in the evacuation of the wounded from the Normandy beachhead in the Allied invasion of Hitler's Europe.

Dr. Hamrick says of his duty aboard an LST (Landing Ships, Tanks), in that historic encounter, that it was "a real interesting tour."

After that, he was ordered back to the United States, where he was assigned to another LST, which he sailed down the river from Pittsburgh, thence to the Pacific Ocean and on to the Okinawan campaign.

He glosses over this part of his life, only to say that afterward he went on to participate in the occupation of Japan. (American experts had forecast 1,000,000 casualties had it been necessary to invade Japan, which this country was prepared to do. But the Japanese surrender in August of 1945, after the two atomic bombs were dropped, averted the bloodbath.)

The Big Blow

Dr. Hamrick recalls the great Okinawan typhoon of 1945, which ripped the deck plates of his LST, the break in the metal extending three or four feet. "They had shipfitters welding it in the middle of the storm."

In the last desperate gasps of the Japanese Empire, kamikaze planes roared over nightly that spring, ramming U.S. ships, but they never attacked Hamrick's LST.

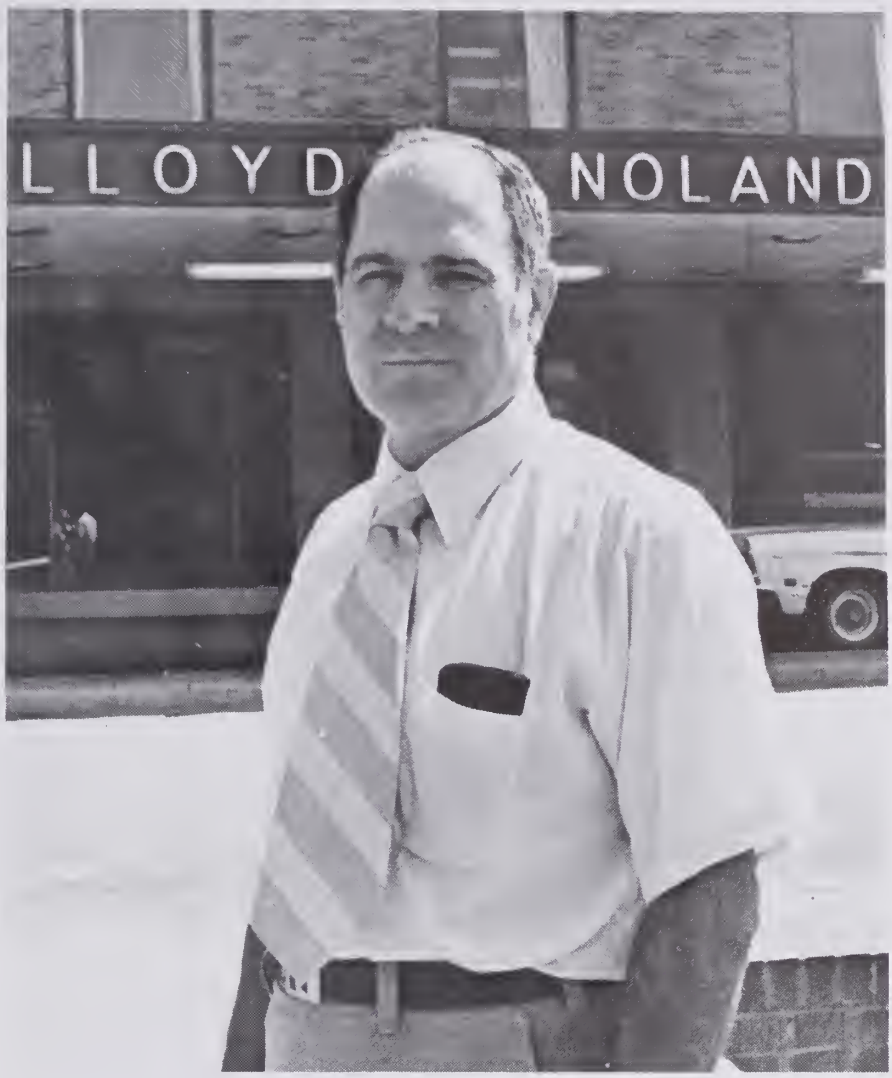
He was discharged, a veteran out of the wars, in the spring of 1946. First he attended Emory Junior College at Oxford, Ga., then on to the main campus of Emory University in Atlanta, where he finished pre-med.

He married Bunny Brannan, an Agnes Scott graduate, in 1949.

Graduated from Emory Medical School in 1952, he interned at the Columbus City Hospital, Columbus, Ga., in 1952-53. He had planned to go into general practice in North Georgia, an area he knew intimately from his boyhood, but decided he needed a year of surgery first.

"I looked at all the opportunities in the Southeast, and I picked this hospital (Lloyd Noland) as the place to

prominent leaders in Alabama medicine.



get a year's surgery. I really only planned to stay a year; then I decided two years were needed."

After the two years were over, he decided that, since he was half-way through his surgical residency, he might as well finish there, which he did. That was 1957.

About the time he completed his residency, the hospital began an expansion of the surgical department. Dr. Hamrick accepted an invitation to join the staff.

"I've been here ever since. This is my 25th year."

Moving Up

In 1964, he was named assistant chief, Department of Surgery, and Associate Medical Director. In 1972, he was picked to become only the third Medical Director of Lloyd Noland in the long and unusual history of the hospital, which began in 1913 with the selection of the man for whom the hospital was later named, as the first Medical Director.

Since the story of Dr. Leon C. Hamrick is, in large measure, the story of Lloyd Noland Hospital, a brief history of the rightly famous institution is appropriate.

The following is liberally extracted from the monograph by E. Bryce Robinson Jr., M.D., the second Medical Director, delivered as a speech to the Newcomen Society in 1970.

Lloyd Noland was born in Fairfax County, Virginia, July 25, 1880. His early life, in upbringing and education, was typical for Virginia near the turn of the Century.

He received his medical education at the Baltimore Medical College, now the University of Maryland, graduating in 1903. After spending a year in practice in northeastern Virginia, he heard about the great Canal-building in Panama.

Dr. Noland went to Panama in 1904 and stayed for nine years, eventually becoming Chief Surgeon of the Colon Hospital.

While there, he became associated with the renowned Dr. William Crawford Gorgas, a native of Alabama. Dr. Gorgas was in charge of sanitation and it was through his efforts that yellow fever was eliminated and malaria brought under control — thus enabling the United States to succeed where France had failed because of the loss of manpower due to sickness.

Hard Times In Jefferson

Back in Birmingham, while Dr. Noland was still in Panama, the Tennessee Coal, Iron and Railroad Company, which did extensive mining of coal and iron in the mineral-rich Jefferson County area, had fallen on hard times during the financial panic of 1907. TCI was bought by U.S. Steel and has been a part of that corporation ever since.

In 1913, George Gordon Crawford, then president of TCI, heard about the work in Panama and about Dr. Noland. Mr. Crawford had grave problems with the health of the workers in the mines and steel mills, located in Fairfield in the western part of Jefferson County.

Workmen would not stick to the job. Turnover was approximately 400% a year. Employees worked an average of only about 13 days a month, the absenteeism mainly attributable to all the illness that afflicted them.

Smallpox, typhoid fever and malaria were rampant. Hookworm, dysentery and enteric hit almost everyone. Typhoid epidemics were common. The unsanitary living conditions of workers and their families were responsible for a vicious cycle of disease.

When workers, constantly exposed to disease, were taken sick, they were not given proper medical attention, becoming carriers for a more rapid spread of disease.

Dr. Noland Accepts

Mr. Crawford knew something had to be done if his company was to survive. He visited Dr. Noland in Panama. An agreement was reached:

Dr. Noland would begin his work in Fairfield in 1913 as Superintendent of the Health Department of TCI. What began in that year was to be recog-

From Talking Rock . . .

nized as a milestone in American medicine: the first large-scale experiment in industrial medicine.

When Dr. Noland came to Jefferson County, health conditions were as bad as in Panama. They may have been worse. There was no sanitary disposal of human waste. Stagnant water pools served as breeding spaces for mosquitoes. The air was alive with disease.

All of which appealed to the adventuresome nature of Dr. Lloyd Noland; he threw himself into the work with his great energy, keeping long hours. He spent $750,000 in the first year alone (at a time when the total state budget for public health was $25,000).

Medicine Triumphs

In 1912, the year before he arrived, there had been 4,850 known cases of malaria in TCI villages. He reduced this to 400 in 1915; to fewer than 100 by 1918. In four years, he had reduced the number of typhoid cases to one-sixth their 1914 total.

It was not until 1925 that smallpox vaccination was begun. The workers and their families resisted the novel idea of vaccination. In fact, his greatest enemy was often superstition.

Shortly after his arrival, Dr. Noland established clinics, better known as dispensaries, in the ore-mining, coal-mining and steel manufacturing areas. The physicians and nurses who staffed the dispensaries became part of the TCI Health Department.

During 1914, there were 129,551 patient visits to the dispensaries; the staff made 84,621 house calls. Dr. Noland set up a central laboratory, with regular examination of water supplies, tests of milk and food supplies.

As a result of his great drive and dedication, the overall health of the area improved dramatically, but there was still a serious obstacle to full efficiency: TCI needed a large central base hospital for the treatment of illnesses of all kinds, especially communicable disease.

Even with the tremendous strides in sanitation and medical care, Dr. Noland was finding it difficult to treat diseases in the small village hospitals. He appealed to the Board of Directors of U.S. Steel in 1916-17 and convinced them of the importance of a company hospital, as an addition to the new experiment in industrial medicine.

First Of Its Kind

The hospital was completed in 1919 at a cost of $1,500,000. The first of its kind, it was named Employees Hospital of the Tennessee Coal, Iron and Railroad Company.

Employees Hospital entered the field of graduate medical education when it established an internship in 1920. Other graduate medical education programs were begun later. Today more than 600 physicians, many of them practicing in Alabama, have had all or part of their graduate training at the institution.

Dr. Noland was very active in affairs of The Medical Association of the State of Alabama and was a member of the Board of Censors, like Dr. Hamrick after him. He died Nov. 27, 1949, at 69, a medical explorer who had once asked the question and then answered it himself:

"After all, can any great geographic discovery or exploration compare with the marvelous explorations and discoveries listed in the history of medicine?"

The Birth Of A Name

Dr. E. Bryce Robinson succeeded him, and was named Medical Director in his own right Jan. 1, 1950. (Leon Hamrick was still in medical school at this time.) The following spring, the Board of Directors of U.S. Steel changed the name of the hospital to Lloyd Noland.

The next year, 1951, U.S. Steel decided to get out of the hospital business. The giant corporation had already disposed of its schools, villages and company stores.

The hospital and 42 acres of land were given to the non-profit Lloyd Noland Foundation. A Clinic building was subsequently built and considerable expansion work has been done over the years.

Admissions to the hospital average 10,500 a year, with some 180,000 annual visits to the Lloyd Noland Clinic.

Many millions have gone into vast improvement over recent years, so that today Lloyd Noland is known the world over — not alone for its health care but also for its teaching facilities.

Currently, there are 35 residents in surgery, medicine, pediatrics, dermatology, ob-gyn, anesthesiology (Dr. Robinson was the first board-certified anesthesiologist in Alabama), and orthopedics (in concert with UAB).

Dr. Hamrick, who took the helm as the third Medical Director in 1972, doesn't do nearly as much surgery as he once did, but he still sees patients three times a week in the busy Clinic and takes his turn taking night calls. He constantly tours the hospital's facilities, including the new nuclear medicine department, among the finest in the Southeast.

He has time for a little fishing now and then, principally at the Inland Lake, but once a year, schedule permitting, he gets to the Gulf.

His biggest hobby is educating his five children, he says. The oldest, Martha, 25, has just been admitted to the bar and will soon enter private law practice not far away. A son, 21, is a medical student at UAB, the only offspring, so far, to follow medicine as a career. But two other daughters are students at Milsaps College, Jackson, Miss., and the youngest is still in high school at Mountain Brook. "I feel real secure with those four daughters," Dr. Hamrick says.

When he's not presiding over the Lloyd Noland or being the family man, he's engrossed in affairs of MASA. He is chairman of the State Board of Censors, having been elected to the Board five years ago, and subsequently chairman of the State Committee of Public Health. He also serves as chairman of the State Board of Medical Examiners, among his many state and national honors. His administration of these important functions has been firm but fair.

Dr. Osler and The Bible

Dr. Hamrick is a quiet, pleasant man, and deeply religious, although he does not flaunt his beliefs. In his office at Lloyd Noland are two plaques. One, from the distinguished physician-philosopher Sir William Osler, begins: "Without faith, a man can do nothing...."

The other is from I Corinthians 13:4-13 (RSV): "Love is patient and kind...So faith, hope, love abide, these three; but the greatest of these is love."

The boy who left Talking Rock 35 years ago has come a long way. ●

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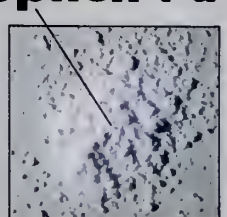


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The only sinusitis formula offering an extra-strength dose of acetaminophen + a decongestant + an antihistamine



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Aspirin isn't best for children

(When they need it most, they tolerate it least.)



Children who are dehydrated (due to fever, diarrhea or vomiting) are particularly prone to aspirin toxicity, even at therapeutic doses.[1a] This is of special concern in infants and young children where repeated therapeutic doses of aspirin can cause severe metabolic disturbances.[1b]

TYLENOL® acetaminophen products have not been associated with electrolyte imbalance or acid-base changes, and therefore are unlikely to produce such a toxic reaction, even in the dehydrated child.

And, equally important, numerous investigators have reported TYLENOL acetaminophen to be as effective as aspirin for relief of fever and pain.[1c, 2-6]

So why risk aspirin complications in children of any age? Recommend TYLENOL elixir, drops or chewable tablets... to effectively reduce fever and relieve pain when they need it most.

Chewable tablets: 120 mg. acetaminophen
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Drops: 60 mg. acetaminophen per 0.6 ml. (one calibrated dropperful) (alcohol 7%)

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. TYLENOL acetaminophen at recommended doses has rarely been found to produce any side effects.

References: 1. Goodman, L.S., and Gilman, A., eds.: The Pharmacological Basis of Therapeutics, Fifth Edition, New York, The Macmillan Company, 1975 (a) p. 335, (b) p. 336, (c) p. 344. **2.** Eden, A.M.: Am. J. Dis. Child. *114*:284-287 (Sept.) 1967. **3.** Mintz, A.A.: J. Ky. Acad. Gen. Pract. *5*:26-31 (Jan.) 1959. **4.** Colgan, M.T., and Mintz, A.A.: J. Pediatr. *50*:552-555 (May) 1957. **5.** Saunders, D.C.: Practitioner *183*:335-338 (Sept.) 1959. **6.** Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryngol. *80*:214-217 (Aug.) 1964.
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McNEIL McNeil Laboratories, Inc., Fort Washington, Pa. 19034

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By JOHN M. PACKARD, M.D.*

Save A Life — Learn CPR

The bumper sticker with the message "Save A Life—Learn CPR" is being seen more frequently on Alabama streets and highways these days, and is being taken seriously by the public.

The goal of the Alabama Affiliate of the American Heart Association is to have 20% of the population of the state (those over 15 years of age and under age 70)—some 400,000 persons in all—trained in CPR by 1982.

Over the past two years, the Heart Association and the American Red Cross have certified over 1,000 instructors in accordance with the revised standards established by the National Academy of Science/National Research Council in 1974 and published in *JAMA.*[1]

These instructors have trained an estimated 25,000 citizens as basic rescuers, including 6,500 emergency medical technicians, emergency room personnel, large segments of hospital personnel, many policemen, firemen, dentists, Alabama Power Company employees and others.

Have you, doctor, been checked out in the revised technique? Do you know what the public is being taught? Are you certified as an instructor and are you helping to teach your colleagues, employees, hospital personnel and others?[2]

The Basic Course

The Basic Life Support course includes discussion of what coronary artery disease is and how it can cause heart attack and sudden death; what the risk factors are and how they might be modified; recognition of the signs and symptoms of a heart attack and the positive actions to take when heart attack signals are recognized.

*John M. Packard, M.D., is Director of Medical Education, Baptist Medical Education, Baptist Medical Centers, Birmingham; Clinical Professor of Medicine at the University of Alabama School of Medicine; and Chairman of the Emergency Care/Cardiopulmonary Resuscitation Committee of the American Heart Association, Alabama Affiliate.

Participants in the course are provided with the knowledge and skills to take timely positive action during a heart attack, prior to and after respiratory or cardiac arrest.

Most of this material is well known by physicians, but woefully few of us can perform CPR in an acceptable manner, using the new training manikins which provide a graphic record of the rate and volume of lung ventilation, of the rate, rhythmicity and depth of chest compression and incorrect hand position on the chest. Knowledge of the correct steps must be combined with practice on a manikin to provide the necessary skills for correct performance.

The steps in CPR are outlined below and displayed on the next page as a "Decision Tree." (Figure 1) They are easy to memorize, but *must be practiced on a manikin to develop proficiency.*

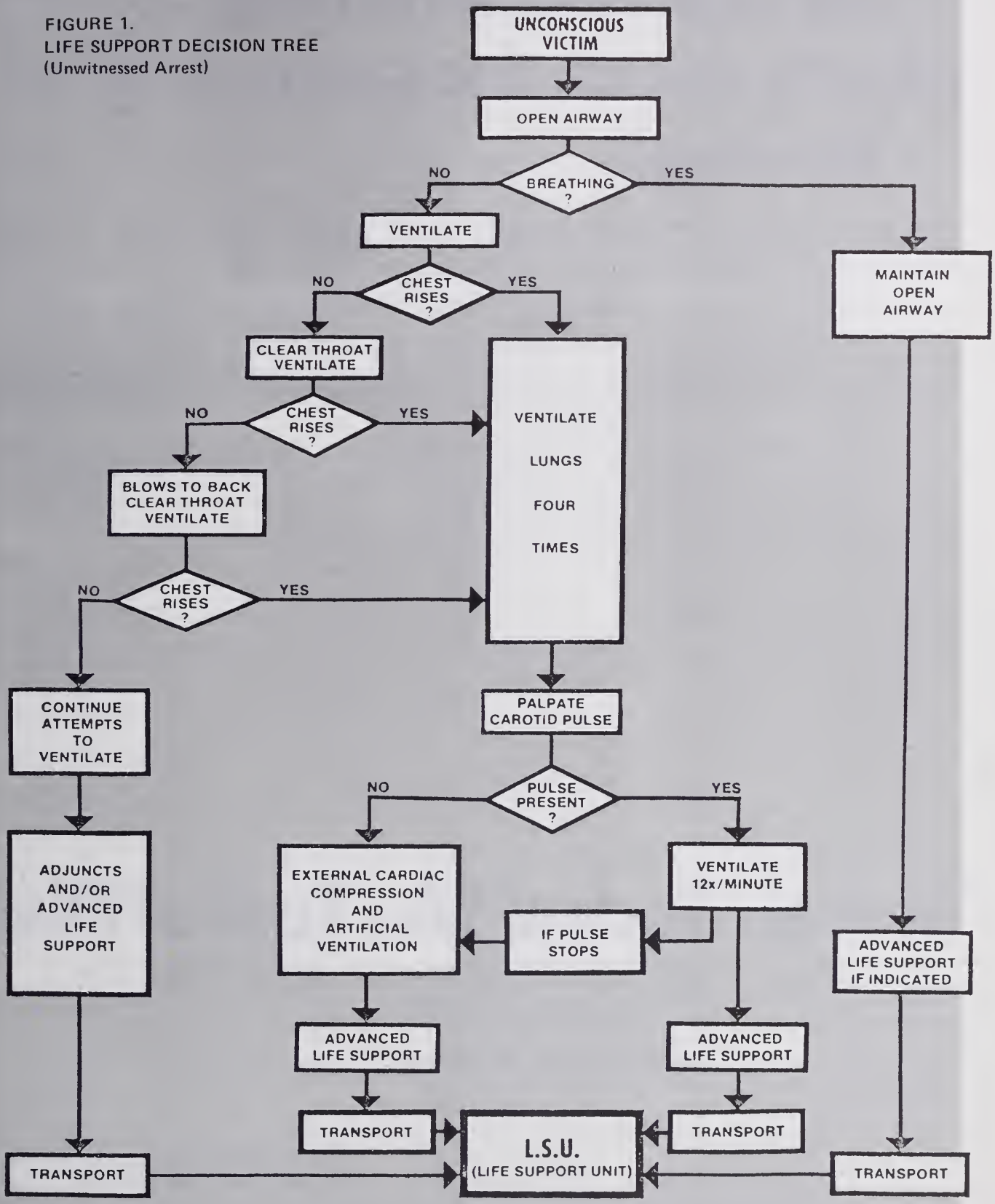
Learn the steps of CPR and practice on a manikin. The precordial thump and the management of an obstructed airway will be discussed next month.

References

1. Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC). Supplement to JAMA, Feb. 18, 1974, Vol. 227, No. 7, pg. 833-868.
2. Packard, J.M.: Why Me? The Need to Learn Cardiopulmonary Resuscitation (CPR). J. Med. Assn., State of Ala. Vol. 47, No. 3, p. 12, Sept. 1977.

1. Establish *unconsciousness:*
   Shake and shout at the victim.
   Call for help.
2. *Position* victim face up on a firm surface.
3. Open *airway:*
   One hand on forehead to tilt head back.
   Other hand under neck to life and hyperextend neck.
4. Check for *breathing:*
   Position your ear near victim's mouth to listen and feel for breathing, while watching chest for movement.
   If victim is breathing, maintain open airway and transport.
5. If no *respiration:*
   Pinch nostrils, seal mouth with your mouth and give *four quick, full breaths.*
6. Check for *carotid* pulse:
   If pulse present, continue one ventilation every five seconds.
7. If no pulse is felt, start *chest compressions:*
   Hands on lower 1/3 of sternum, elbows straight.
   Smooth rhythmic compressions, depressing sternum 1½-2 inches.
   1 rescuer: 80 compressions/min. (Count "One and two and...")
   2 rescuers: 60 compressions/min. (Count "One one thousand, two one thousand, three one thousand...")
8. Couple chest compressions with *mouth-to-mouth* breathing:
   1 rescuer: 15 compressions at 80/min., then 2 rapid breaths.
   2 rescuers: 5 compressions at 60/min., then 1 breath.
9. Don't stop CPR for more than *5 seconds* until victim recovers or is pronounced dead.
10. For an infant or small child:
    Airway opens with less head tilt.
    Give *puffs* of air, covering both nose and mouth with your mouth.
    Compress chest with *two* fingers in *mid-sternum.*
    Compress at rate of 100-120/min. (Count "One-two-three...")

FIGURE 1.
LIFE SUPPORT DECISION TREE
(Unwitnessed Arrest)



Reprinted from JAMA, Vol. 227, No. 7, Feb. 18, 1977.

Standards for CPR and ECC

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

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Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital, the alcohol content is 15%.

See next page for brief summary.

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Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

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These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

Speeding Skateboarders

From Medical Tribune

NEW YORK—"I was doing 30 in my Oldsmobile going down a hill and there was this kid pulling away from me," recalls Dr. John E. McDermott.

A motorcyclist gunning his engine, right? Wrong, says the Seattle orthopedic surgeon. It was a kid on his skateboard. And, he says, a speed of 25 to 40 m.p.h. is nothing.

At a recent California competition, a skateboarder was clocked downhill at a record 57 m.p.h.

The hottest thing on wheels today, the skateboard is a nationwide craze reborn from the ashes of a 1960s fad. For anywhere from $10 to $100, the adventuresome purchase dizzying speed and an exhilirating sense of danger.

With a shift of body weight, millions of Americans are making kick-turns and toe-taps, banking curves and slalom racing on an absurdly disproportionate wheel base. The high is over when the rider jumps—or falls—off.

Judging by statistics, there's a lot of falling. As the sport's popularity soars, so does its accident rate. In 1973, according to the Federal Consumer Product Safety Commission, the nation's emergency rooms treated 3,682 skateboard-related injuries.

By 1975, an alarming 27,522 accidents were logged in hospitals, and in 1976, the number soared to 71,438.

Meanwhile, the total estimated number of skateboard injuries jumped from 72,000 in 1975 to 188,000 in 1976.

Thirteen skateboard-related deaths were reported between 1973 and April 1977.

Sixty-five to 75% of the injuries occur among adolescents aged 11 to 20, Dr. McDermott found in a recent survey of skateboard injuries in the Seattle area.

"It's mainly a sport practiced by adolescents before they get their driver's license," he said. "When adults try it, it's usually as a dare or after a cocktail party. I just saw two adults injured after the same cocktail party—one fractured his arm."

An adult, no matter how agile, is likely to be pretty wobbly on a skateboard even without an alcohol high, for the taller the rider, the narrower the angle for dynamic equilibrium.

Fred Astaire, whose agility has never been questioned, recently "wiped out," fracturing his wrist.

Most accidents occur on sidewalks and streets where riders compete with pedestrians and autos and the surfaces are scarred with cracks and littered with debris.

Skateboarder's haunts also include drained swimming pools, storm-drainage canals and parking lots.

The list of injuries that attend skateboarding is impressive—fractures of the wrist, tibia, clavicle, femur, ankle, elbow, hand, toe, hyoid, skull, and face; contusions; lacerations; and abrasions severe enough to be called burns; sprains; strains and dislocations.

In an analysis of 152 injuries in 142 patients at Hawaii's Tripler Army Medical Center during 1975, the upper extremity, including the clavicle, was injured 122 times (82%); the lower extremity 26 times (17%); and the spine or pelvis, once.

According to Drs. Gregory A. Popich and Gerald W. Mayfield, who presented their report at a Las Vegas meeting of the American Orthopaedic Society for Sports Medicine, several injuries were peculiar to skateboarding. There were five cases of crush injuries of the hand or foot,

CONTINUED ON PAGE 42



Medical Education At The Community Interface

DEAN'S REPORT
by Silas W. Grant, M.D.,
Acting Dean,
School of Primary
Medical Care,
Huntsville

The post-World War II development of the free-standing medical school with its full-time faculty, university hospital and strong commitment to research and specialty training temporarily marked the demise of the historical role of the practicing physician as a teacher of medical students.

A resurgence of need for clinical teaching by the practitioner in partnership with the academician has accompanied the establishment of community-based medical education programs with their emphasis upon primary care training such as those in Huntsville and Tuscaloosa.

The community-based educational setting provides a meeting place for the establishment of medical practice with that of academic medicine. Ideally, it combines the practice-derived experience of the former with the scientific foundations of the latter and this within the type of patient care context in which most physicians-in-training will subsequently practice.

Its perceived merits are many and varied: For the state — the prospect of more even geographical distribution of physicians with larger proportions electing primary care careers. For the practicing physician *cum* teacher — intellectual stimulation and a responsible role in shaping a subsequent generation of physicians. For the student — instruction by experienced physicians with close and continuous supervision; assured exposure to both the commonplace and the unusual in illness and disease; guided attitudinal development as well as acquisition of clinical knowledge and skills, etc.

The tenability of certain of these perceived merits may be documented while others lie within the realm of articles of faith; nonetheless, all have a ring of desirability and are deemed to justify the time and resources expended.

Progress Report

In the four and one-half years since first acquiring a dean, the Huntsville program has recruited faculty and developed a curriculum, has produced 34 new M.D.'s, has 35 in training, and has provided elective experiences and selected core rotations for numerous others. Average scores of our first two classes on Part II of the National Board of Medical Examiners compare favorably with that of their counterparts within the state and nationally.

Further, over 90% of graduates to date have obtained either their first or second choice of residency placement. In addition, 10 physicians have completed the local family practice residency program, 31 others are in training at the present and the establishment of additional residencies is envisaged. The overall program is established; its viability has been demonstrated. This has been accomplished by the now 165 local volunteer and part-time clinical faculty working in concert with the small nucleus of full-time persons. In the last year, for example, the local medical community gave over 10,000 hours of documented time to the various aspects of medical education.

The possible merits of community-based clinical training in general are many; the experience to date of the local program has been positive. In looking to the future it seems timely to ask, what are the prospects for continuing productive collaboration of practitioner and academician in this and similar programs? More pointedly, what are the areas of vulnerability in that collaboration?

A major area of vulnerability is at the organizational level. It lies in the fact that the community-based medical education program is a non-traditional form of organization the final structure of which perhaps has not yet been defined. Unlike the free-standing medical school, it relies heavily upon voluntary cooperation rather than upon formal authority and a single chain of command in the pursuit of its goals.

On one hand, it is dependent upon the local physician community for faculty, for patients, and for access to hospital and ambulatory resources.

On another, it relies upon the full-time academician for coordinating activities and facilitating the development of teaching skills. It is at the same time accountable to governmental bodies for fiscal purposes and ot the national academic bodies for program accreditation. Its continuation presumes a delicate balance between these sources of potentially divergent constraints. This balance

seems most subject to upset at the local level and this in the event of failure by the participants, whether volunteer or full-time, to appreciate fully the accommodations required of each.

Return To First Principles

Just as the community-based model represents in part the return to a previous era and concept of medical education, so does it require a recollection of the basic functions of the physician. Simply stated, these seem to be two in number:

First, providing succor and aid to his fellow man who suffers from a state of ill-health or disease; second, insuring the future continuity of what is true and best in the science and art of medicine.

It is the latter responsibility which needs the serious problem-solving efforts of both the academic and the practicing community. It is recognized as a common goal; however, its pursuit further requires recognition of differences in orientation and situation among the participants and willingness to reduce conflict between those differences in order to develop efficient means to pursuing the goal.

At the level of individuals, a major requirement for re-entry of the practicing physician into the teaching arena is an expanded definition of his professional role to include a teacher component. This may be stressful. For example, the autonomy, independence and privacy characteristic of private practice have no parallel in the process of medical education. Medical education is an organizational process, not simply a collection of individual activities. The performance of the teacher is visible, it is judged by colleagues and by students, and as a teacher one delegates to his peers the right to make such judgments. A parallel source of frequent stress is that posed by simultaneously being an established practitioner and a neophyte as a teacher, a discrepancy quickly resolved with experience.

Similar requirements for expanded definitions of professional role exist for the full-time participant from the academic quarter. While the career ladder of university life emphasizes research and publication, these acquire secondary importance in the community-based setting where teaching is the primary mission.

The full-time faculty is responsible for serving as management, administrative and planning resources to their volunteer colleagues from whom there is the opportunity to learn more of the art and craft of the sustained provision of medical care. It is not a role involving control but a more involved one combining coordination with accountability.

Competitive Anxieties

At the general level, the major source of vulnerability for the community-based educational program seems to lie in competitive anxieties between the community practitioners and the full-time university personnel. This includes anxieties arising from real or perceived competition for patients, for status, for control of hospital policies and for control of medical program curricula and policies.

Of these, perhaps the greatest concern rests with questions of university dominance in the hospital arena — a concern which events of the last 30 years of medical education give much to validate. That validation presumes, however, a dichotomy of interest, purpose and activity between the practitioner and the academician. It ignores the fact that avoidance of that dichotomy is a necessary condition for the existence of a community based medical education program.

The existence of such competitive anxieties, to a degree, is a positive check on the tendency of organizations to become progressively more formal.

From the side of the practitioner, it may be seen as an influence preventing the re-creation of the self-contained medical school.

From the side of the academician, it may function to provide means of maintaining coherence and of documenting the quality of the educational program. Each partner has legitimate proprietary concerns. For example, matters of hospital policy and practice norms belong to the community while accountability for curriculum and the overall quality of training rest with the school. Definition of the sometimes elusive boundaries between considerations of this sort and the teaching process as a shared area of concern and responsibility is in process in Alabama and nationwide. Upon it hinges the future of the community-based program with its involvement in medical education of the practicing physician.

Both Worlds

As Acting Dean of the School of Primary Medical Care, I have the unique opportunity to observe, work and, I suppose, attempt to survive, in the interface between practitioner and academic communities. My perspective, however, has been formed through the combination of 25 years of active rural practice and five years of full-time academic activity.

From that perspective, I know that the fundamental hopes and dreams of my colleagues on both sides of the discipline are surprisingly similar: Pride in good patient care and in the accomplishments of medicine, concern for ethical and moral values, concern for the quality of medical education for the next generation, a driving desire to contribute in terms of both service and education.

With these aspirations in common, men of good will can discuss and solve the plethora of problems of medical education as they affect practice and the problems of practice as they affect medical education. From these solutions this generation has the prospect of passing to the next a stronger science, a finer art, and a more integrated discipline. ●

REFERENCES

1. Stephens, G. Gayle, M.D.: The School and the Community — Partners In Medical Education. Journal of the Medical Association of the State of Alabama. January, 1976, pps. 57, 44.
2. Willard, William R., M.D. The Practicing Physician and the Clinical Teacher. Journal of the Medical Association of the State of Alabama. December, 1975, pp. 61, 63.

Dr. Grant wishes to acknowledge the invaluable help of Donald McCalister, Ph.D., Director, Office of Medical Student Affairs, in the preparation of this report.

ama consultant

THE LATEST TECHNIQUES OF PRACTICE MANAGEMENT

By Jack Walsdorf, Program Director
Department of Practice Management,
Division of Medical Practice
American Medical Association

SYSTEMATIC APPROACH TO "DELEGATION"

Everybody talks about delegation—doctors who delegate the most seem to be the most productive—but how do you delegate in a medical practice?

The theory is ideal, the doctor should spend as much time as possible doing only the things he is particularly equipped to do and then delegate the procedures that others can do competently as he might do them.

If they are delegate to staff at a lower income level than the doctor, it is economically advantageous and if the doctor then uses the time to provide more "hands-on care" it will improve the quality of his patient care.

The question of "how to delegate" should be proceeded by "why," "when," "what" and "to whom" should you delegate. The major purpose for delegating is to save time for the physician. If you delegate a task that takes only eight or nine minutes and is done only once a month, you haven't accomplished very much.

The time required to properly delegate such a task could be more than the time saved. In considering the delegation of any procedure the first question to ask is, "How much time will this save?"

It is equally important to consider "when" to delegate. The negative approach to this question, when *not* to delegate, is the most obvious. Do not wait until an epidemic or crisis situation—when the reception office is overflowing, all of the exam rooms are filled and you have promised to take your spouse out to dinner to celebrate your anniversary and will not be able to leave the office before 8 p.m.—and then start delegating to any staff member available.

The time to delegate is when you have plenty of time to train the staff person to perform competently the task you want done.

To Each His Own

There are no instructions to tell you what specific tasks to delegate but there is a procedure you can follow that will help you select the tasks that can be delegated to your advantage in your practice.

Make a list of all of the tasks you do. If you identify each separate task, not just overall procedures, the list will probably be over 100 different items. Then carefully examine each item in the list and ask: 'Does this task have to be performed by a physician? Could it be delegated to a nurse or a medical assistant? If I delegated the task, would it save me time?'

You will probably find a number of tasks that could be delegated which you are doing because you did them when you started your practice.

No one would suggest taking these tasks away from you if there is nothing to be gained. But if your practice situation has changed, if you now have more patients, if you are not spending as much time with each patient as you would like, or if you have added more exam rooms or more medical assistant help, then you might want to consider delegating the particular task.

Do this with every item on the list and mark it accordingly. Do not throw the list away. Save it and review it a year later. At that time, your practice situation may again be different and alter some of your decisions.

To Whom To Assign?

When you decide to delegate a task to whom will you assign it? You will, of course, want to know that the staff person has the background experience or training, or the ability to learn to do the task competently. After all, you are responsible for the actions of your employees.

But a factor you do not want to overlook is the willingness of the person to do this task. Most of the time you will find your employees are willing and eager to take on new jobs for the self satisfaction that comes from increasing ones skills. This is one of the few things you can offer in "upward mobility."

However, you may find an employee who would not be interested or comfortable in doing the particular task. You definitely would not want to assign the task to such a person so the first thing you do is to ask the employee: "Would you be willing to learn to do this? Would you be comfortable in doing it?"

Assuming the person you have selected is most willing to do the task we now come to the question of how do you delegate it. Delegation is more than just telling. To do it properly you need to follow one of the numerous jobs training textbook formulas that emphasize "show and tell," evaluation, and authorization limits.

You start by writing a step-by-step, detailed description of the task. An easy way to do this is to dictate it and let the person who is going to do the task transcribe the dictation. After this has been done from the written transcription your employee can become familiar with the instructions.

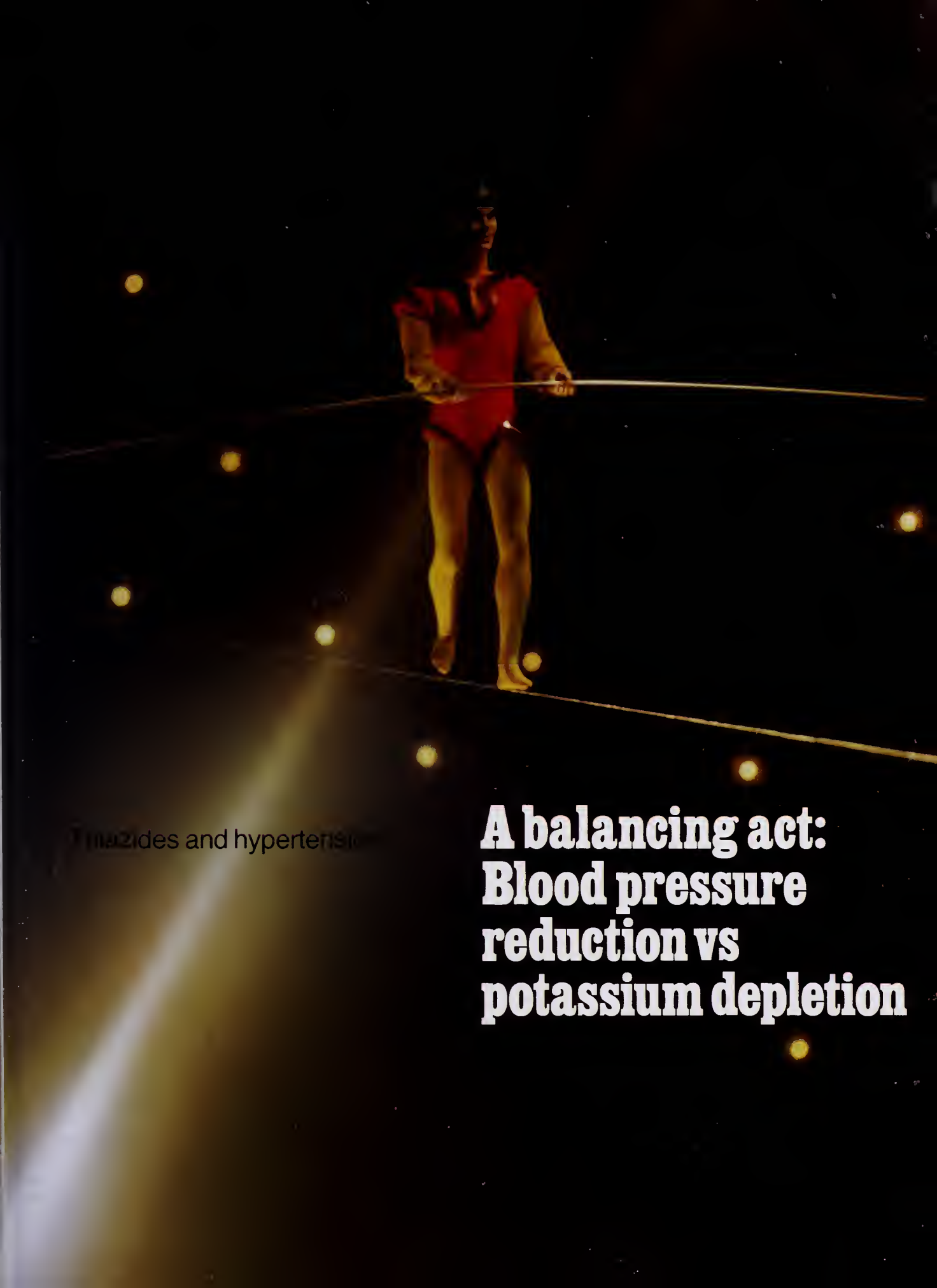
Then, Show How

Then you demonstrate, describing why and how you do each step; and in turn, have your employee do the task for you, with a similar step-by-step description. If it is a complicated procedure, establish a system for periodic evaluation so that you can be sure the task is being performed as well as you would do it.

And finally, set some limits beyond which the person should not go in performing the task, but should report back to you. For example, we know of a situation where a medical assistant, having difficulty in finding the vein to draw blood, jabbed the needle into the patient's arm 12 times.

There is a management technique that encourages employees to use their own initiative and we subscribe to that in the business office operation.

Suggestions from the staff can be most valuable in developing efficient office procedures. However, in delegating a task that has been performed by the physician, to an employee who has not done the procedure, it is essential for the doctor to follow a step-by-step training technique. ●



Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

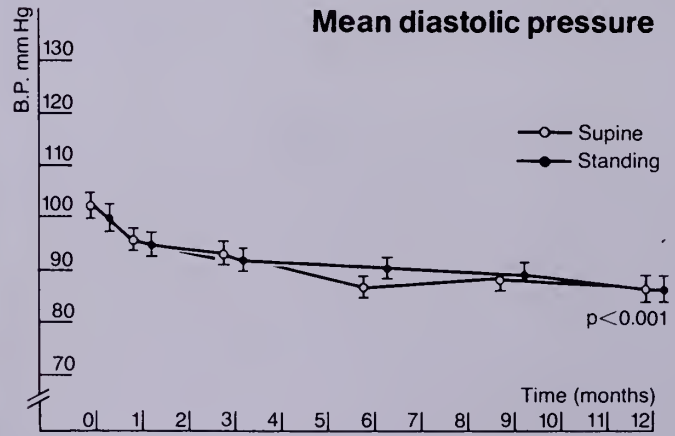
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762,1975.



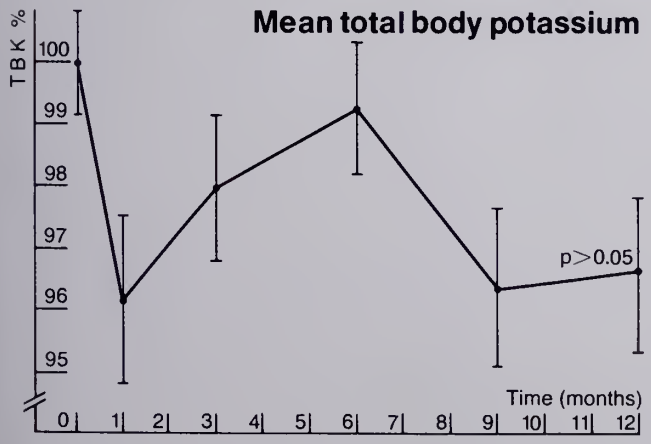
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5 mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0 mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day Naturetin® Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

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CME In Your Home

By George D. Oetting, Ed.D.
Director of Education

As you attend medical meetings or review journals with educational advertising it is evident that a major development in CME is the use of educational materials which can be studied by the physician in his own home whenever he has a few free moments.

Commercial CME producers offer numerous audiocassette tapes on a variety of medical topics; others offer interesting combinations of cassettes, self-tests, study references, etc.

Recent issues of the *Journal* are indicative of this trend with articles on MASA-purchased videocassette tapes from the Network for Continuing Medical Education and the self-assessment programs available from many specialty societies.

Most doctors now have cassette players for their personal use to review tapes on medical developments in their areas of interest; some have even purchased 1/2" or 3/4" videocassette players so they can view these tapes at home without the necessity for using hospital viewing facilities.

So, home study is becoming a big part of CME. It may get bigger as the costs of attending "live" CME programs escalate and physicians have difficulty finding the time to get away for such meetings.

Consequently, I thought that MASA members might like to gaze into the crystal ball for a moment about the future technology of home study. A recent article in a publication of the National Home Study Council provides an interesting peek:

Newest Trend In AV Hardware: Video Discs (NHSC Report, Vol. III, No. 1, Apr. 77)

"The video disc is coming! In late 1977 or early 1978, TV viewers will be able to schedule their own shows in a new way. They'll select movies, musical performances, or other material on video discs, slip the discs into players wired to their own TV receivers and push a button.

Two major organizations will soon begin selling their video players regionally. RCA is field testing its SelectaVision and N. V. Philips, which has teamed up with MCA, Inc., an American entertainment company, is developing its own new player called DiscoVision.

The implication for home study education is clear: video discs have the potential for revolutionizing "home based education." Entire home study courses could be supplemented with video disc "assignments."

The latest price estimates are about $400-$500 for the RCA player, and $10 to $16 for a disc or set of discs. The MCA version will be about $600, with discs ranging from about $4 to $10.

CONTINUED ON PAGE 62

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Eye Drops

MILO H. FRITZ, M.D., F.A.C.S.*

Many years ago when the fuzz was still on the peach, accidents and ill health happened to the other guy and the sense of immortality coursed in my blood. I returned to Alaska after World War II and a year's refresher courses in EENT to practice in Anchorage.

In spite of the expressed opinion of many, that a fellow of my qualifications would starve to death, I was busier than I cared to be from the first day.

Lest any of you think this statement vainglorious, recall, I was like the only guy selling life preservers at a shipwreck. I did not need to be a supersalesman.

One day I had prescribed eye drops for a lady with a mild Morax-Axenfeld conjunctivitis. A few days later she returned. "My eyes are no better," she said.

"Have you been taking the drops every three hours when awake?" I asked.

"Yes," she said, "and I must say that they taste like hell."

To say that I was stunned was not putting too high a polish on it. In looking at the dropper bottle my directions in clear type accusingly read, "Two drops every three hours when awake for seven days."

Shaken by this, I explained I wanted her to put two drops "in" each eye every three hours when awake.

Instead of suing me, as is the custom nowadays, she acknowledged that some doubt had crossed her mind but she was too ashamed to call. Since then my directions have been more explicit.

Sometimes later during evening rounds at the Providence Hospital on a beautiful blue and gold day in Anchorage, I was writing on a chart when a friend, dressed in a hospital gown, stopped to say good evening and to announce that he was recovering from a hemorrhoidectomy.

The head nurse piped up and asked, "Are you taking your medicine three times a day?"

"You mean these?" said the patient holding up a big rectal suppository wrapped in foil. "You bet I am," said the patient, "three times a day and I never tasted anything worse in my whole life; that's what I came to see you about."

The girl blushed, stammered and burst into uncontrollable laughter finally getting a grip on herself and telling the patient how to use his rectal suppositories properly.

In my practice, before the advent of Cyclogyl and Mydriacil, I used atropine as a cycloplegic three times daily in children for three days before their appointment, leaving the role of dropper to the parents while the child, of course, was the droppee. I told the patients, "One drop in each eye three times daily for three days preceding the appointment."

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What I meant, of course, was "on", not "in" the eye, which is common prescription jargon even to this day.

It soon became apparent that in spite of sincere statements that the directions were being carried out about half the time the drops may have landed some place but they never got anywhere near the eye. Because, in the remaining half, in which the parents assured me that the drops had been put "in" the eyes the brisk reactions of the child's pupil clearly show that such had not truly been the case.

About that time Cyclogyl and homatropine arose on the ophthalmological horizon and we administered these drops in the office because they required multiple instillations. It soon became apparent that to some people having drops instilled in the conjunctiva was as traumatic as a preanesthetic midthigh amputation, taking one parent to hold the child's head, one to hold his body and the office nurse spreading the lids and bombing the eyes with the drops.

Most kids submitted to less than this karate approach but a large percentage roared and fought. If six kids were in the office and the first one raised hell you could count on the others doing the same.

But this approach has the blessing of custom and is used in most ophthalmologists' offices today. (See P. C. Diorio and Ober R in the *J Pediatric Ophthal.* 12:123, 1975 "Method of Instilling Ophthalmic Medication in Child Eyes." Of course, they meant "on" and not "in". But let it go.)

Then, one day about 10 years ago, the answer to this vexing little problem came to me in a blinding flash of inspiration. I suppose William Harvey, Semmelweiss, Roentgen, Pasteur, and Lister would understand. But, the Nobel Prize Commission will doubtless pass this arbeit by. Such is the reward of obscurity.

Well, anyway, to keep you in suspense no longer, here's how to use eyedrops and insure their getting into the conjunctival sac ("in" the eye) where they belong.

Ask the patient to lie down on his back, put a piece of tissue in his right hand. Having the face parallel to the ceiling and guiding the chin gently have the patient turn his head a few degrees to the left. This will make a little depression over the right medial canthus. Then you say, "Now close your eyes, not tightly, just as though you were sleeping."

Next, lightly resting the ulnar side of the hand in which you are holding the dropper or dropper bottle on the patient's forehead, you say, "Now I am going to drop the medicine right here in the corner of your closed eye and it will make a little pool."

So you drop the medication right there and say to the patient, "Now blink your eyes." All but the most squeamish do and you say, "What happened to the medicine?" And the patient says, "Why, it's run right into my eye! How come none of my other eye doctors never showed me this?"

Modesty, so far, has prevented me from telling them I'm just smarter.

Next, I say, "Now put your tissue right here where I am tapping you," gently tapping the right temple while gently rotating his face a little to the right. When the patient does this the medicine runs across the eye, spills out and is caught in the tissue instead of running into his ear—grounds for a lawsuit, of course, unless you are an anarchronism, like me, practicing otolaryngology as well as or even better than ophthalmology.

Then the left eye is done in the same way and the patient then is helped to sit up and told to blot, not rub, any excess moisture on his temple or cheek. Finally, I let the patient do it himself.

In younger children, the person instilling the drops can hold the tissue. One of the beauties of this "pool technique" is that it can easily be done by the patient himself on a construction project, oil platform, in school or almost anyplace he happens to be when the times for using his medication arise.

Emergency medical teams and in-service training trainees have all expressed their satisfaction upon learning this simple technique of carrying out what sometimes is a traumatic performance both for the dropper and the droppee.

In some children, or adult situations where any pressure or manipulation would be disastrous, a drop of Ophthain can be used first after which you could pour aguaregia on the eye (not that this is ever done, of course) without immediate complaint.

In some youngsters initial squeezing shut of the eyes will soon stop if you or the person who is instilling the drops will just keep quiet a moment.

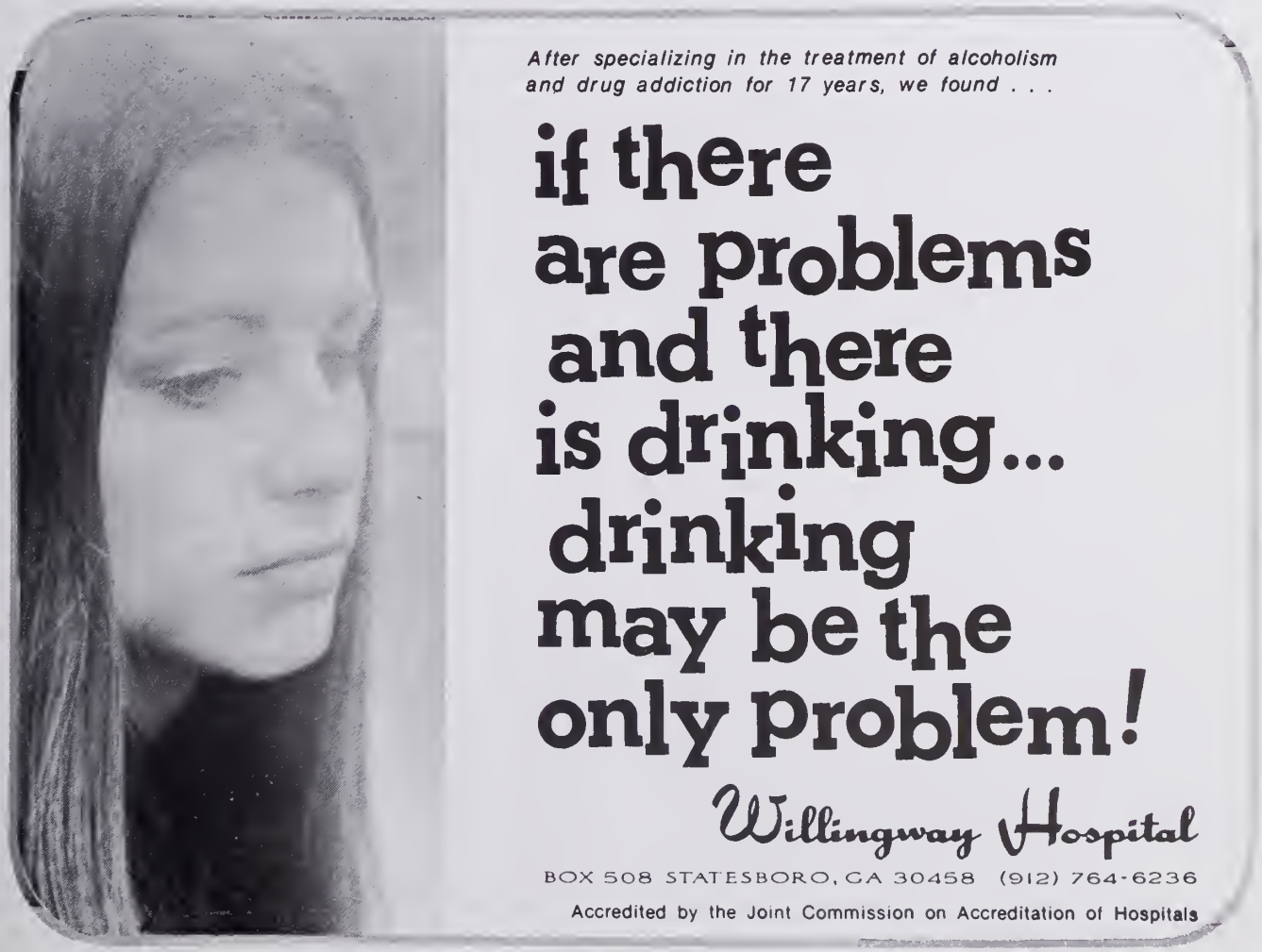
The kid, surprised at the lack of uproar from doctor, nurse and parents, sometimes looks up to see why he is not getting the attention he is used to and then, of course, in go the drops.

In others, pulling down the lower lid with your finger on the inferior orbital rim will get the job done.

Admittedly this does not rate with the use of the laser for the cure of certain retinal diseases or the intraocular lenses used after cataract extractions as one of the giant steps forward in ophthalmology.

But, it will relieve the ophthalmologist or any doctor and his assistants who use drop medications on the eyes and his patients of one of the small anfractuosities of life.

We need all the comfort we can get as the ominous shadow of federal medicine looms over us all.



HOUSE CALLS

In Rockford, Illinois, a city of 150,000 about 90 miles northwest of Chicago, John P. McHugh, M.D. makes far fewer house calls these days than he did 10 and 15 years ago, although he enjoyed them very much.

"I loved making house calls," he says, "and doing so enabled me to learn a lot about my patients that aided in my care of them. But house calls just aren't productive."

Not only is there "a limit to what I can do with my hands and a stethoscope," the 54-year-old Dr. McHugh explains, but "there has been an increasing sophistication among patients. They expect us to be able to give them an answer. There is, in the house call, an inability to complete the job of examination—the blood count, the X-ray—a limit to what I can expect to do for the patient and what the patient expects me to do for him."

In years past, "when patients did not accept hospital and emergency care as willingly as they do today." Dr. McHugh, who has been in practice for 27 years, recalls that he would "go to the house, make an examination, load them in the back of my station wagon and bring them in to the hospital myself."

Now, he says, that responsibility has been taken over by the trained Emergency Medical Technicians who staff the police, fire department and private ambulance services.

"The patient with a suspected heart problem, the patient described by a family member as too weak and colorless to come to the office—those are the very persons who ought to have an ambulance with monitoring equipment go out and bring them to the hospital than for me to try to handle the situation at the house."

In such cases, Dr. McHugh explains, "the EMTS are skilled in delivering the patient to the hospital alive. With their monitoring capability and two-way communications between the ambulance and the hospital emergency room, I am providing a far safer situation for my patient than I could offer on my own. And once the patient arrives at the hospital, I can do things—I can get test results and begin treatment. I can complete things at the hospital."

Dr. McHugh cites the same time problem noted by Dr. Freeman—that a single house call can deprive several other patients of care.

"Economically and productively, considering my daily load, it is not good use of my time," he states.

"I am working from 7 a.m. to at least 6:30 p.m., including the noon hour, because I have a medical student and am teaching over lunch. I am so occupied that an hour-long house call—which is average, depending upon what part of town the patient may live in—would keep me from seeing four or five patients in the office."

On the Sunday that he is on call for himself and the other five physicians in his group, he will spend 14 or more hours at the hospital, receiving and returning phone calls, screening reported symptoms and directing various patients to come in for examination.

Dr. McHugh and the other members of his group arrange with the county health department and the Visiting Nurses Association for a fair amount of home care.

"Both give excellent support as far as following the patient," he says. "They monitor blood pressure, urine output, range of motion, check for bedsores, give enemas as indicated, handle impaction.

"I might have a young mother who may or may not have either the equipment or the intelligence to prepare formula for the new baby. The health department or the VNA can make a home visit, report back and say, yes, she is handling this all right and the baby is being well cared for.

"For a diabetic patient, the health department or VNA nurses can draw up the syringes for a week and put them in the refrigerator so there is no mixing required by the patient or family member—only administration. I leave orders for urine tests, weight check, that kind of thing. They can provide better monitoring than I could provide and than the patient could afford if I had to be fully responsible."

However, Dr. McHugh adds, "in those circumstances—particularly with aging patients—where the house call will serve the need," he and his five fellow physicians do make them—probably averaging two per month for each doctor.

He had made one the previous Saturday. "I have a patient who has problems with both hips, and transport is extremely difficult for her.

"I go and check her weight and her lungs and watch for possible swelling. I do it more to show her that I'm interested in her than for any productive value. I still have to send the lab people out to do her potassium."

George Buehler has practiced on the edge of metropolitan Los Angeles since 1938. When he began, he made three and four house calls a day. He now makes several a year, when requested by long-time patients for whom it would be difficult or impossible to come to his office.

He firmly agrees with Dr. McHugh that relatively little can be accomplished during a house call, with all the testing capability at the office or the hospital. "About all you can give the patient at home is sympathy," he says, "and that is not adequate."

In his solo practice, he cares for patients ranging in age from newborns to centenarians. Many of his older patients he visits regularly in nursing homes—"at least once a month and more often where necessary," he explains.

In Los Angeles, fully-equipped ambulances and trained paramedics aid successful patient transport as they do in Illinois, and Dr. Buehler supports Dr. McHugh's contention that these are the personnel and vehicles which can best assure safe transport to appropriate sites of care for the ill or injured patient.

While few patients in his practice even ask for house calls any more, Dr. Buehler is quick to respond where the need exists or where the patient can be effectively served. The most recent series of home visits he made was to a man dying of a malignancy. "He did not want to go to the hospital and his wife did not want him to go," the physician related. "That was a case where I very willingly made house calls."

Another consideration for the physician in a metropolitan area is whether the request for the physician to come to the home is a legitimate one, Dr. Buehler points out.

"It wouldn't be a problem in some area, but in large cities we have to accept the fact that there are all sorts of things that can happen. The person may be calling as a ruse to get the doctor into a situation where malicious action will result."

Possible dangers to physicians and less than optimum benefits to patients notwithstanding, village, city and large metropolitan area doctors do still make house calls. More than 17 million times a year.—Courtesy of the AMA ●



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Tuberculosis In Children: Experience In Health Clinic Setting In North Alabama

by

Sylvia B. Morris, M.D.*
Dana M. Brasfield, M.D.**
Ralph Tiller, M.D.***

The incidence and mortality rates for tuberculosis in the United States have shown a steady decline since 1900. This has been attributed to improved living conditions, chemotherapy, population screening, and improved follow-up of patients.

However, in Alabama tuberculosis continues among the "top 20" leading causes of death and Alabama is fourth place in the U.S. in new active cases reported.[1]

Previously infected individuals account for 90% of all new case reports of tuberculosis. The Alabama State Health Department Tuberculosis Control division reports that during 12 years of isoniazid preventive therapy, less than 0.1% of new cases of tuberculosis were reported from persons who completed the recommended 12-month regimen with isoniazid.[2] Therefore, the prevention of this disease lies in the treatment of primary infection.

A group of children less than 18 years of age was followed in a tuberculosis clinic during a two-year period from July 1, 1974, through June 30, 1976. The results of that followup are presented to emphasize the role of this age-group of patients in the prevention of tuberculosis.

The district health service encompasses a predominantly rural population of over 218,000 in four northern Alabama countries. A child enters the tuberculosis service either as a contact of a known case or after a skin test conversion.

Diagnosis:

The tuberculin skin test is a major diagnostic tool. The skin test material consists of 5 TU of purified protein derivative (PPD-intermediate strength) tween-80 stabilized, injected intradermally. In screening situations the jet injector is used rather than the syringe and needle but all positives are confirmed with intradermal PPD.

Measurement of 10 mm induration after 48-72 hours is a positive reaction. Skin tests are routinely applied at 12 to 15 months of age prior to measles and rubella vaccines and yearly thereafter as follow-up permits. Skin tests are performed on all contacts of a patient with known tuberculosis.[3,4]

All children with a positive skin tes. are investigated further with a chest X-ray and, when possible, an aerosol-induced sputum collection for culture and sensitivity.

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Treatment of those with skin test conversion or active primary disease consist of isoniazid alone for one year.[4,5] Those with progression of disease clinically or radiographically or with extrapulmonary infection are treated with a combination of two or more drugs for 12 to 24 months as needed for clinical response.[4,6,7]

Active primary disease is identified on X-ray by one or several areas of pneumonitis with regional lymph node enlargement.

Table I

Children 0-18 years of age followed from 7-1-74 — 6-30-76.

Total children — 226	
+PPD reactions (>10 mm)	165
Contacts to cases of known tuberculosis	124 (76%)
Reactors with normal chest X-ray	106 (64%)
Abnormal Chest X-ray	56
Extrapulmonary involvement	4
Treatment	
Surgical excision of superficial lymph nodes	2
Chemotherapy	
A. Contacts	39
completed 12 months	23
less than 12 months	10
refused Rx, lost	6
B. Reactors	165
Isoniazid only	128
completed 12 months	114
less than 12 months	13
lost to followup	3
discontinued	3
allergic rx	1
two or more drugs	38
INH + Rifampin	14
INH + Paraminosalicylicacid (PAS)	17
INH + Ethambutol (EMB)	5
INH + Rifampin + EMB	2
INH + PAS + streptomycin (STM	1
INH + EMB + STM	1

Results

As indicated in Table 1, a total of 226 children less than 18 years of age were followed from July 1, 1974, through June 30, 1976. Of these 226 children, 165 (73%) had a tuberculin reaction of 10 mm or greater. One hundred twenty-four of these (75%) were contacts of known cases of tuberculosis.

A normal chest X-ray was found in 64% of the reactors. An abnormal chest X-ray occurred in 56 patients (34%). Two percent of the patients had extrapulmonary involvement.

The recommended course of 12 months of INH therapy was completed by 59% of contacts. Eighty-two percent of positive reactors completed 12 months of INH therapy. Twenty-three percent required two or more drugs.

Discussion

The majority of tuberculin positive children were contacts of known tuberculosis patients, had a normal chest X-ray and were without extrapulmonary involvement. A high percentage of these positive reactors completed the recommended therapeutic regimen.

Detection of primary tuberculous infection is of utmost importance in prevention of tuberculosis. Investigation of contacts of known cases of tuberculosis yields a population with a significant degree of infection and potential for future reactivation and disease formation. However 25% of those infected had no known contact case as a source of infection.

Tuberculosis remains a public health problem and its prevention depends on early detection of those with infection. It behooves those responsible for the care of children to be aware of the prevalence of this disease.

One must suspect it, screen for it, provide prompt and continued care should the diagnosis be made. The seriousness of the disease is well illustrated by the case presented.

Case Report

S.W. was a 10-month-old white male referred to The Children's Hospital for evaluation and treatment of meningitis. He had received oral erythromycin for treatment of otitis media nine days prior to admission.

Four days before admission he developed vomiting, irritability, and fever. Three months earlier a positive tuberculin skin test was documented and he had supposedly received daily isoniazid. (Later a history of non-compliance in this regard was obtained.) The mother had active pulmonary tuberculosis and was receiving isoniazid, streptomycin, and rifampin.

The initial physical examination revealed an irritable infant whose weight was below the third percentile. His height was in the 90th percentile. The anterior fontanelle was bulging, and meningismus was present. The cerebrospinal fluid showed a mild pleocytosis of 96 white blood cells, a predominance of monocytes, a protein of 103, and a glucose of 11. The chest X-ray was normal.

The initial concern was that of the presence of a partially treated bacterial meningitis or tuberculous meningitis. The treatment regimen included intravenous ampicillin, chloramphenicol, fluid restriction, INH, STIM, and Rifampin. Repeat lumbar punctures continued to reveal the mild pleocytosis, proteinosis and low glucose. In addition, a markedly elevated spinal fluid lactate level of 61 was consistent with tuberculous meningitis.

The ampicillin and chloramphenicol were discontinued and steroids were begun. Investigation of the family revealed the mother to have *Mycobacterium tuberculosis* sensitive to all drugs. She had received steptomycin for two months and was currently on isoniazid, Rifampin, and Myambutol. The father had a positive skin test and normal chest X-ray. The grandmother and aunt had positive skin tests and chest X-rays showing calcified lesions.

The patient was discharged 28 days later. His course was characterized by continued temperature spikes, but a resumption of normal activity and decline in cerebrospinal fluid lactate levels (34 mg%).

He had received steroid therapy for 21 days and was discharged home on isoniazid, streptomycin, and rifampin. He was re-admitted eight days later with irritability, lethargy, bulging anterior fontanelle, refusal to crawl. The head circumference had increased two centimeters since discharge and there was resistance to motion of the right hip.

The spinal fluid was again abnormal with a protein of 124, cell count of 56 and glucose of 25. X-rays of the hip revealed a lytic lesion of the right femur and pus was aspirated from the area. An acid-fast stain of the aspirate was positive for mycobacteria.

The head circumference increased rapidly and a major motor seizure occurred on the second hospital day. A ventriculo-atrial shunt was placed; the hip was immobilized, and ethambutol was added to the therapeutic regimen.

A chest X-ray showed calcification of the right paratracheal and paravertebral lymph nodes and a right upper lobe infiltrate. He was discharged home six weeks later on the four-drug regimen, plus phenobarbital.

Cultures of the femoral aspirate grew *Mycobacterium tuberculosis* sensitive to all drugs.

Follow-up three weeks later revealed the patient to be clinically well except for a 5 x 3 cm cystic mass at the left sternum. The area increased in size and became erythematous over the subsequent week.

Aspiration of the area showed pus and X-rays demonstrated a defect in the sternal bone. Cultures remained negative, but pathologically the lesion was compatible with tuberculosis.

A draining sinus of the anterior chest wall persisted during the next five months. Follow-up at 20 months of age shows a normal physical examination with minimal infiltrate in the right upper lobe and prominence of the right hilum on chest X-ray.

The streptomycin was discontinued after three months. He currently receives isoniazid, rifampin, and ethambutol.

References

1. Center for Disease Control. Tuberculosis cases and case rates in 1974. Morbidity and Mortality Weekly Reports 24: 229, 1975.
2. Statistics from Bureau of Preventable Disease. Alabama State Health Department.
3. Edwards PQ, et al: Story of the tuberculin test from an epidemiological viewpoint. Am Rev Resp Dis 81: 1, 1969.
4. American Academy of Pediatrics: Report of the Committee on Infectious Diseases. Seventeenth edition. 1974, pp 183.
5. Ferebee SH, et al: Prophylactic effects of isoniazid in the treatment of primary tuberculosis in children. Am Rev Tuberc 76: 942, 1957.
6. Smith HMD: Tuberculosis and sarcoidosis. The Biologic Basis of Pediatric Practice. First edition. Edited by R. E. Cooke, S. Levin. New York McGraw Hill Book Company, 1968. pp. 752-775.
7. Brasfield DM, et al: Pediatric Update — Childhood Tuberculosis. J Med Assoc St Ala 46: 23, 1976.

Adjuvant Therapy In The Treatment Of Malignant Glioma

A REVIEW ARTICLE AND CCNU BRAIN PROTOCOL AT UAB

by

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Keith H. Langford, M.D.†
and
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Only a few patients having malignant gliomas, particularly the more malignant glioblastoma multiforme, survive with conventional treatment techniques. With conventional treatment techniques, there is a greater than 90% mortality within 18 months.

It is generally agreed that as aggressive surgical removal of tumor as possible is required in order to have the most immediate improvement[20]. By this means, adequate tissue is available for proper histopathological interpretation, and there is far less tumor burden for adjuvant therapy to manage.

The most logical approach to improve survival rates is to study treatment failure patterns. One unique aspect of the failure pattern in the glioblastoma multiforme is local failure rather than distant metastasis.

Glioblastoma multiforme can be destroyed by a very high dose of radiation. The question is how great a risk one is willing to accept for tumor sterilization compared to the increasing risk of radiation necrosis within normal brain tissue[1,18]. Acceptable radiation dose schedules of 5000-6000 rads in five to six weeks to the whole brain have a 5% complication rate. This dose range has not controlled many patients. (However, the median survival time has been doubled with the post-surgical use of radiation therapy[23]).

We know that there is a considerable amount of necrotic tissue present in malignant gliomas. It is recognized in the radiotherapy of cancer that the radioresistence of hypoxic cells in tumors relative to that of well-oxygenated cells in normal tissue may constitute a serious barrier in attempting to increase the therapeutic ratio between damage to tumor tissue and normal tissue[15]. Several methods have been suggested to restore the radiosensitivity of hypoxic tumor cells. These methods include the use of hyperbaric oxygen prior to and during radiation[4], radiation with heavy nuclear particles[16], and the use of chemical radiosensitizers.

Adjuvant chemotherapy as an additive effect on tumor cell death has been under intensive clinical trial.

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Hyperbaric Oxygen Breathing

It has been documented that hypoxia reduces the radiosensitivity of cells to X-or Gamma rays by a factor of 2.5 to 3.0. Also, modern microelectrode techniques have confirmed that oxygen tension within a tumor can be increased when the tumor is under hyperbarix oxygen pressure.

Over the past 23 years, many clinical trials have taken place to try to define the value of hyperbaric oxygen. Mostly, four tumor sites have been intensively investigates; namely, head and neck, bronchus, bladder and uterine cervix.

Churchill-Davidson[10,11] treated eight patients with glioma delivering 3500 to 3750 rads in six fractions over 18 days under hyperbaric oxygen pressure and were unable to demonstrate sterilization of the tumor in any of these patients.

Chang[9] reported preliminary results of randomized trial utilizing various dose fractions with 38 patients treated with hyperbaric oxygen and 42 patients with air but no significant difference could be demonstrated.

Therapeutic gain with the addition of high-pressure oxygen of radiation has not been clearly demonstrated as was originally anticipated.

Evidence from animal experience suggests that this may be due to the reduction in the rate of blood flow which can occur as a result of breathing oxygen at three atmospheres pressure producing vasoconstriction[17].

One other possibility of failure may be the poor choice of patient material for clinical trial.

Particle Beam Therapy

The advantage of particle irradiation, such as neutron or proton, is the lesser dependency on the presence of oxygen for its cell killing capacity compared with X-or Gamma rays. However, in contrast to the precision and efficiency of modern megavoltage X-or Gamma ray machines, all existing neutron and proton machines are usually of fixed port, low exposure rate, and wide penumbra, which make them inferior technically[7]. Also, these are available only in a few places in the world due to expense and technical problems[2].

In one controlled clinical trial using neutrons, the patients showed a significant benefit compared to those treated with conventional photons[8].

A cooperative clinical trial using fast neutrons to treat glioblastoma multiforme is about to begin in the United States.

At this point, particle radiation has the potential for

Results of Brain Tumor Study Group

Protocol	Median Survival
No Therapy	15 weeks
BCNU	21 weeks
Irradiation	30 weeks
BCNU and Irradiation	40 weeks

immediate and sustained favorable impact on the management of the cancer patients by providing better local tumor control, but it is still far from clinical use.

Chemical Radiosensitiziers

There are several difference mechanisms by which cells can be sensitized to the lethal effects of ionizing radiation. These include suppression of endogenous sulphydral compounds, the inhibition of postirradiation repair processes, the incorporation of base analogues which localize the radiation damages within DNA, and processes which minimize the oxygen effects.

Some relatively non-toxic pharmacological agents have been found recently which do preferentially sensitize hypoxic cells, such as a cell cycle dependent radiosensitizer (Halopyrimidine) and hypoxic radiosensitizer (electron-affinic sensitizers).

From in vitro studies, the halogenated pyrimidines such as 5-bromodeoxy uridine (B U d R) seemed particularly promising radiosensitizers, but at present, there is no convincing evidence that the cancer cure rate is increased.

For those tumors where hypoxic cells may be a problem in radiotherapy, the oxygen mimics, particularly the electron-affinic compounds represent one of the more promising lines of research at the present time. The two nitroimidizales, RO-07-0582 and metronidazole (Flagyl) were identified as potent radiosensitizers with low toxicity, and have been used clinically as radiosensitizers with early promising results[13,14,21].

Electron-affinic compounds share the property of setting the stage for increased free-radical production much as does oxygen. Thus, they hold a promise of minimizing the oxygen effect as a reason for failure in the irradiation of hypoxic tumors. These drugs are effective only in the absence of oxygen. The ability to cross the blood-brain barrier and to produce a high concentration in tumor tissue reflects the physico-chemical nature of metronidazole.

A vital difference between the action of these drugs and that of oxygen is that the sensitizers are not rapidly metabolized by the cells in the tumor through which they diffuse into necrotic tissue.

Recently, in clinical trial, Urtasun et al[22] have shown an improved survival time for glioblastoma patients treated with nine fractions of X-rays with high doses of Flagyl.

Chemotherapy

In previous uncontrolled studies, chemotherapy agents have failed to provide evidence of significant improvement in the treatment of glioblastoma. Recently, nitrosourea compounds have shown encouraging results in a controlled clinical trial. BCNU and CCNU are likely to be useful agents since these compounds are lipid soluable, and therefore, capable of passing the blood brain barrier.

A cooperative randomized clinical trial has been sponsored by the brain tumor study group[23]. These patients are randomized between BCNU in doses of 80 milligrams per meter square intravenously for three consecutive days and repeated about every six to eight weeks, and whole brain radiation therapy of 6000 rads. These are compared with the combined use of BCNU and radiation therapy. The combination of the drug and radiation therapy is superior to either modality (Table).

Of the nitrosourea drugs, CCNU and MeCCNU have the advantage of oral administration although the intravenous BCNU may exhibit slightly greater oncolytic activity.

Favorable responses to oral CCNU comparable to those achieved with BCNU were reported by Fewer et al and Rosenblum[12,19].

Recently, Bryce Weir et al[3] undertook a randomized clinical study in patients with high grade astrocytoma, the controlled evaluation of CCNU, radiation therapy and both modalities combined. In this study, the combination groups show a 25% increase in mean survival time over the radiation alone or the CCNU alone.

Other drugs claimed to be of value in the DTIC, Vincristine, methotrexate and mithromycin.

CCNU Malignant Glioma Protocol

There is convincing evidence of effectiveness of CCNU. Moreover, it is much more comfortable for the patients than intravenous BCNU. We have used the CCNU brain protocol since November 1976. CCNU is available by prescription. There have been no unexpected complications in the use of this drug so far.

The three most prevalent side effects of CCNU are nausea and vomiting, thrombocytopenia and leukopenia. The nausea and vomiting tend to occur four to six hours after a dose and persist for less than 24 hours. The thrombocytopenia occurs about four weeks after a dose and the median nadir will last between one and two weeks. The leukopenia occurs approximately six weeks after a dose with the median nadir lasting one to two weeks. Measurable hepatic cell damage is less of a problem with CCNU compared to BCNU[5,6].

Astrocytomas of grades III and IV are entered into the UAB brain protocol. Surgical decompression is in the form of excision of as much tumor as is consistent with minimal disability. Radiation therapy in combination with CCNU chemotherapy would start within three weeks of the surgical procedure. Bone marrow, renal and hepatic function studies are required prior to the treatment.

The dose of radiation is 6000 rads accumulated in five to six weeks and delivered to the entire brain. The patient is treated five days each week with megavoltage radiation. The whole brain is defined as the entire intracranial contents which can be encompassed through lateral parallel opposed fields. Half of the required daily dose is delivered through each skin entrance every day.

The recommended dose of CCNU is 130 milligrams/M^2. This is given as a single dose by mouth every six weeks. In patients with measured limited bone marrow capacity the dose is reduced to 100 milligrams/M^2 every six weeks or withheld.

Repeat course of CCNU should not be given until circulating blood elements have returned to acceptable levels; that is, the platelets should be above 100,000/cu. mm. and the leukocytes above 4000/cu.mm.

Every patient receiving CCNU should be treated for one year, unless toxicity develops or there is tumor recurrence.

The quality of survival is measured by repeated neurological examinations. The relapse-free time interval and total survival are measured from the time of diagnosis.

Discussion

A number of drugs of widely varying structure have been shown to sensitize both normal and malignant mammalian cells to the effects of ionizing radiation. However, little has been achieved in attempting to sensitize selectively the tumor cells. Several clinical studies with nitrosourea show definite effect in malignant glioma as an adjuvant therapy.

One of the main problems in radiation therapy is that hypoxic cancer cells are less radiosensitive than well-oxygenated cancer cells. A promising line of research at the present time is electron affinic chemical sensitizer which is supposed to have a selective effect in hypoxic tumor cells. Several clinical trials report some promising preliminary results.

Although particle beam radiation provides lower oxygen enhancement ratio, and is one approach to the problem of dealing with hypoxic cancer cells, the use of radiosensitizers with more readily available standard radiation equipment may solve this problem with the use of these simpler facilities.

Until further advances are made, such as the discovery of a good safe selective radiosensitizer and a more effective chemotherapy agent, the control of glioblastomas will remain a formidable challenge. Therefore, until there is a proven more effective adjuvant therapy program, the use of oral CCNU will continue to be used in the UAB brain tumor protocol, because it is effective and easily tolerated by most of the patients. ●

References

1. Boden, G.: "Radiation Myelitis of Brain Stem," J. Fac. Radiologists, 2: 79, 1950.
2. Brady, L.W.: "Future Prospect of Radiotherapy in Gynecologic Oncology," Cancer 38: 553-565, 1976.
3. Bryce, W. et al: "Radiotherapy and CCNU in the Treatment of High-Grade Supratentorial Astrocytoma," J. Neurosurgery, 45: 129-134, August, 1976.
4. Cade, I. S., and McEwan, J.B.: "Megavoltage Radiotherapy in Hyperbraric Oxygen," Cancer 20: 817-821, 1967.
5. Carter, S. K., Schabel, F. M., Jr., Broder., L.E., and Johnson, T.P.: "1, 3-Bis (2-Chloroethyl)-1-Nitrosourea (BCNU) and Other Nitrosourea in Cancer Treatment: A Review," Adv. Res., 32:22, 1972.
6. Carter, R. D., and Krementz, E.T.: Proc. Am. Assoc. Cancer Res. 12:88, 1971.
7. Catterall, M.: "Fast Neutron-Clinical Requirements," Brit. J. Radiology, 49: 203-205, 1976.
8. Catterall, M., Sutherland, I., and Bewley, D.K.: "First Results of a Randomized Clinical Trial of Fast Neutrons Compared with X or Gamma In Treatment of Advanced Tumors of the Head and Neck," Brit. Med. J.,2:653-656, 1975.
9. Chang, C.H., Pool, J.L.: "Radiotherapy of Glioblastoma Multiforme under Hyperbraric Oxygenation." A prospective study presented at the American Cancer Society Brain Tumor Symposium, Atlanta, Georgia, February, 1976.
10. Churchill-Davidson, I., Foster, C. A., Wiernik, G., et al: "The Place of Oxygen in Radiotherapy," Brit. J. Rad., 39:321-331, 1966.
11. Churchill-Davidson, I., Sanger, C., and Thomlinson, R.H.: "High-Pressure Oxygen and Radiotherapy," Lancet, 1:1011-1095, 1955.
12. Fewer, D., Wilson, C.B., Boldrey, E.B., et al: "Phase II Study of 1-(2-chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU) in the Treatment of Brain Tumors," Cancer Chemotherapy Rep., 56: 421-427, 1972.
13. Foster. J. L., Wilson, R.L.: "Radiosensitization of Anoxic Cells by Metronidazole," Brit. J. Rad., 46: 234-235, 1973.
14. Gray, A.J., Dische, S., Adams, G. E., Flockhart, I.R., and Foster, J.L.: "Clinical Testing of the Radiosensitizer RO-07-0582," Clin. Radiology, 27:151-159, 1976.
15. Gray, L.H., Conger, A.D., Ebert, M., Hornsby, S. and Scott, O.C.A.: "The Concentration of Oxygen Dissolved in Tissue at the Time of Irradiation as a Factor in Radiotherapy," Brit. J. Radiol., 26: 638-648, 1953.
16. Hall, E.J.: "Radiobiology of Heavy Particle Radiation Therapy; Cellular Studies," Radiol., 108: 119-129, 1973.
17. Johnson, R.J.R.: "A Comparison of the Effect of Hyperbraric Oxygen Plus 5% CO_2 on Tissue Circulation and Oxygenation," Radiol., 98: 177-181, Jan., 1971.
18. Lindgren, M.: "On Tolerance of Brain Tissue and Sensitivity of Brain Tumors to Irradiation," ACTA Radiologica (Suppl.) 170: 1-73, 1958.
19. Rosenblum, M.L., Reynolds, A.L., Jr., Smith, K.A. et al: "Chloroethyl-Cyclohexyl-Nitrosourea (CCNU) in the Treatment of Malignant Brain Tumors," J. Neurosurgery, 39: 306-314, 1973.
20. Traveras, J.M., Thompson, H.G., and Pool, J.L.: "A Study of Survival in 425 Cases," Am. J. Roentgenol., 87: 473-479, 1962.
21. Urtasun, R.C.: "Clinical Phase I Study of the Hypoxic Cell Radiosensitizer, RO-07-0582," Radiology, 1976.
22. Urtasun, R., Band, P., Chapman, J.D., Feldstein, J.L., Mielke, B., and Fryer, C.: "Radiation and High Dose Metronidazole (Flagyl) in Supratentorial Glioblastoma," New England J. of Med., 294: 1364-1367, 1976.
23. Walker, M.D.: "Nitrosourea in Central Nervous System Tumor," Cancer Chemotherapy Rep., 4:21-26, 1973.

Speeding Skateboarders

CONTINUED FROM PAGE 23

secondary to manhole covers dropping on individuals trying to recover skateboards from storm sewers.

And there was a high incidence (19%) of Smith's type-III distal radial fractures among the 62 fractures affecting the radius.

Typically the rider fell forward and to the side on the palm of the outstretched supinated arm.

Head injuries, fortunately, are relatively rare, but Dr. McDermott said he was aware of two deaths due to such injury in Seattle alone and had been informed of at least six others.

Alarmed by the exploding accident rate, safety experts are urging skateboarders to abandon their traditional casual garb—shorts, T-shirts, barefeet—and don the protective accounterments usually reserved for sports with a capital S. The current feeling is that the skateboards are not toys but sporting devices.

Protective attire is rarely seen in street skateboarding but, as the increasingly organized sport gets out of the streets and into special parks where protective equipment is the rule, that may change, too.

And at the very time American skateboarders are forming leagues, staging competitions for prize money, and petitioning local authorities to build special parks, the fad is spreading around the world.

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Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

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Pulmonary Artery Catheterization With The Swan Ganz Catheter

Ozdemir Dokumaci, M.D.*
Mrs. Faye Hall, CRTT, Miss Beverly Harrison, Miss Sandra Strong †

In 1970, a flow directed, balloon-tipped, cardiac catheter was introduced by Swan, Ganz and co-workers for the purpose of monitoring pulmonary artery and pulmonary artery occlusion pressures.[20]

In elderly or in critically ill patients with myocardial, respiratory, renal or hepatic decompensation, direct measurement of pulmonary artery wedge pressure is desirable as an index of left ventricular function, allowing the objective determination for additional volume, diuretics, and inotropic drugs.

The accurate definition and continued reassessment of cardiac performance provided by the Swan-Ganz catheter is of particular significance in the treatment of critically ill patients.

Until recently, central venous pressure (CVP) catheters have been used to reflect left atrial pressures, assuming that right and left ventricular filling pressures are closely correlated in response to fluid infusion and changes in myocardial competence.

However, in the critically ill patient it may be incorrect to assume that the right atrial pressure always accurately reflects left heart pressures, since recent studies have shown that central venous pressures and pulmonary artery pressures correlated in only 50% of the surgical patients studied.[3,16,12,2]

Normally, the diastolic pulmonary artery pressure is closely related (within 1-4 mmHg) to the mean pulmonary capillary wedge pressure. Conditions that increase pulmonary capillary wedge pressure. Conditions that increase pulmonary vascular resistance may significantly alter this relationship so that the diastolic pulmonary artery pressure exceeds the mean pulmonary capillary wedge pressure by as much as 8 mmHg. Some of these conditions include cor pulmonale, pulmonary embolus, and pulmonary fibrosis.[18]

Effective Management

Since we began to employ pulmonary artery catheterization with the Swan-Ganz catheter in August 1975, we have been able to accurately monitor the cardiovascular status of high-risk patients during and after surgery. The immediate availability of quantitative information provided through continuous hemodynamic monitoring has permitted earlier detection of complications, which has made the management of high risk patients more effective and safe.

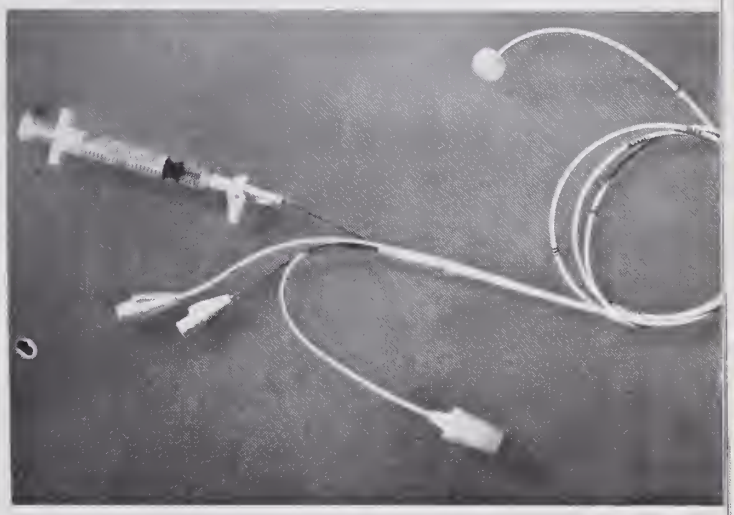


FIGURE 1. TECHNIQUE: Swan-Ganz Catheter

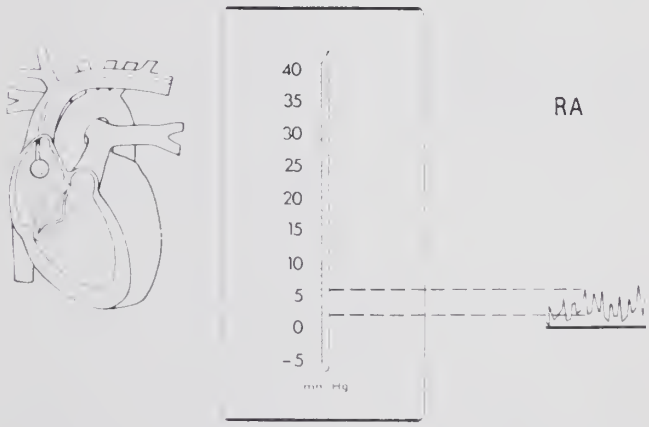


FIGURE 2. Pressure Trace when Catheter Tip is in the Right Atrium.

The number 7 Fr. Swan Ganz Flow-directed Thermodilution Catheter* is routinely utilized by our department. The choice site for introduction of the catheter is via the right or left internal jugular vein. Once the catheter has been introduced into the internal jugular vein, it is then advanced until a right atrial wave pattern appears on the oscilloscope. (Figure 2) →

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†Respiratory Therapist, Department of Anesthesiology, University of Alabama Medical Center.

*Edwards Laboratories, Division of American Hospital Supply Corporation.

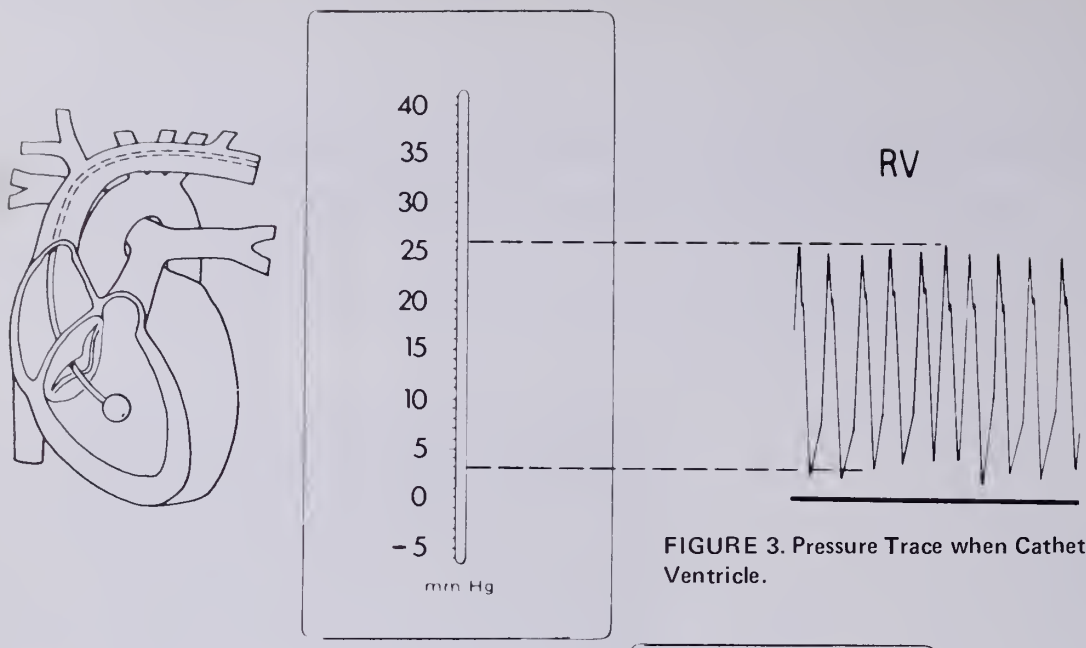


FIGURE 3. Pressure Trace when Catheter Tip is in the Right Ventricle.

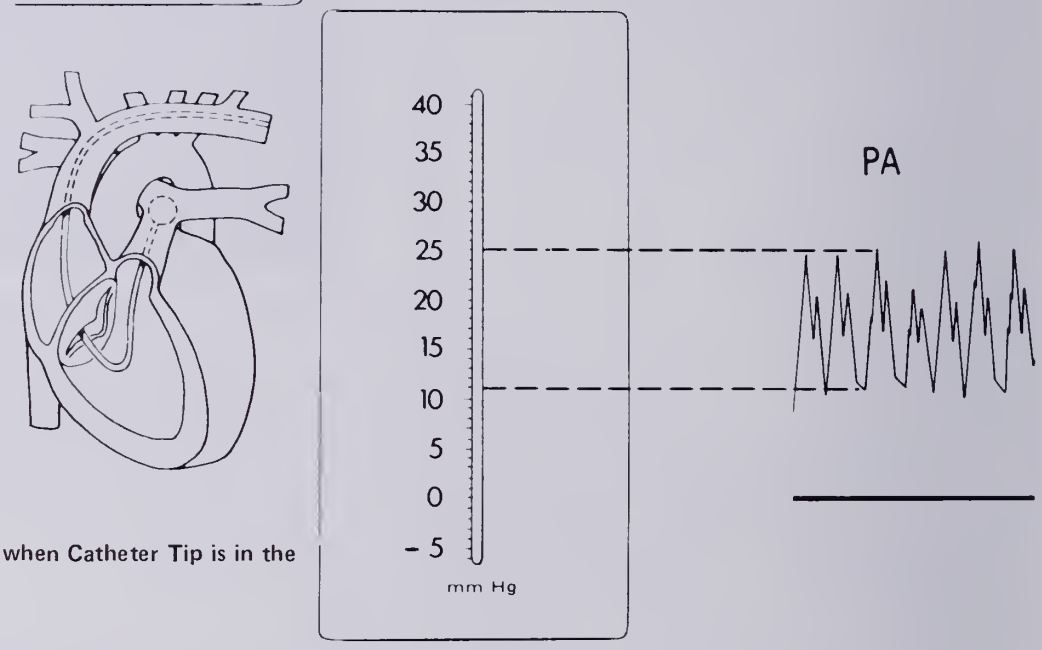


FIGURE 4. Pressure Trace when Catheter Tip is in the Pulmonary Artery.

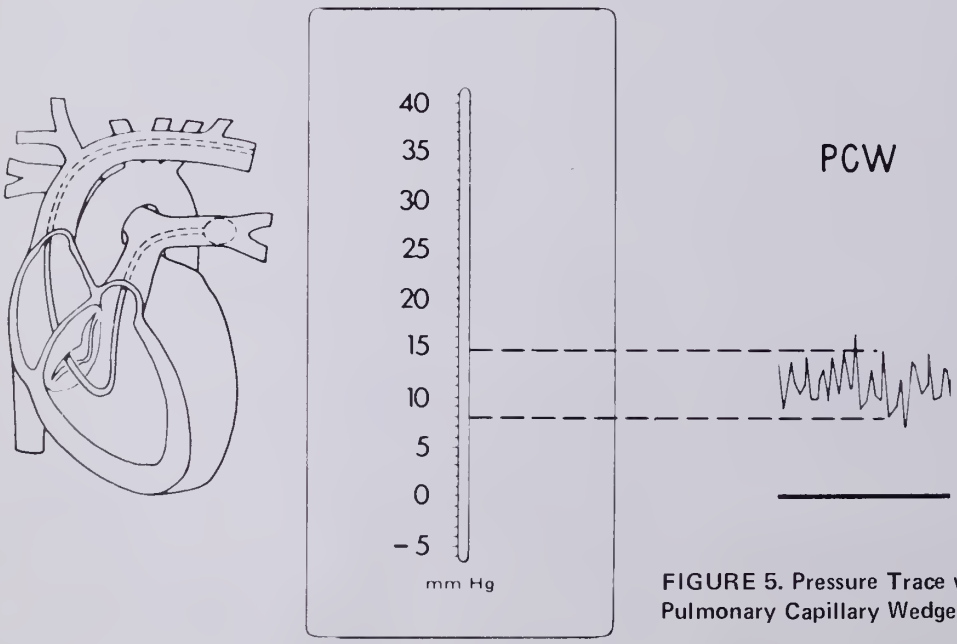


FIGURE 5. Pressure Trace when Catheter Tip is in the Pulmonary Capillary Wedge Position.

The balloon is then inflated to its recommended volume. Further advancement in increments of one inch along with the flow of blood rapidly carries the catheter through the triscupid valve into the right ventricle. The pressure waves of this chamber of the heart will be higher and pulsatile. (Figure 3)

From the right ventricle, the catheter is then carried by blood flow and manual advancement through the pulmonary valve into the pulmonary artery. The systolic pressure wave at this point is as high as that of the right ventricle. A gain in diastolic pressure is also noted. (Figure 4)

The catheter is advanced further still until it wedges in a distal arterial branch. When recording PCW pressures, two positive excursions can frequently be distinguished during each cardiac cycle. The mean pressure will normally be 1-4 mmHg less than the pulmonary artery diastolic pressure. (Figure 5)

Once a PCW trace has been observed and pressure readings recorded, the balloon is immediately deflated, allowing the catheter to float back into the pulmonary artery.

Clinical Application

Abnormal pulmonary artery pressures may occur in the following situations:

1. Increased pulmonary vascular resistance secondary to cardiac dysfunction, pulmonary venous obstruction or chronic lung disease.
2. Increased pulmonary artery flow as in left to right shunts.
3. Hypoxia of various etiology.
4. Pulmonary emboli.
5. Overhydration or too rapid parenteral fluid administration.

Elevation of pulmonary capillary wedge pressure may be noted in the following circumstances:

1. Pulmonary venous obstruction secondary to valvular heart disease or myxoma.
2. Congestive heart failure.
3. Too much or too rapid parenteral fluid administration.

The Swan-Ganz catheter is useful in the differential diagnosis of cardiopulmonary problems. For example, an elevated pulmonary artery pressure with normal pulmonary wedge pressure would indicate a primary pulmonary problem such as pulmonary emboli. An elevated pulmonary artery pressure with an elevated pulmonary capillary wedge pressure would point to a primary cardiac problem or fluid overload.[3]

Simultaneous assessment of respiratory parameters is useful for determining the effectiveness of pulmonary function, along with the use of mechanical ventilation, including IMV, PEEP, etc., and their pulmonary and cardiac effects.

The assessment of cardiac performance in high-risk patients by measuring cardiac output and filling pressures of both ventricles appears to be one of the most valuable aides for therapeutic decisions and evaluations of therapeutic effectiveness.

In acute myocardial infarction and some other myocardial diseases, optimal left ventricular performance can be achieved in the presence of a mean pulmonary artery wedge pressure value of between 14-18 mm Hg.

Increased filling pressure above this range does not improve cardiac performance. In fact, stroke volume will begin to decrease, pulmonary vascular congestion will occur, excessive transudation of fluid into the extravascular pulmonary spaces will begin. As a result, oxygen exchange deteriorates and both cardiac and respiratory work increases. Pulmonary edema is usually present at pulmonary artery wedge pressures above 30 mm Hg. Mean pulmonary artery pressures of less than 12 mm Hg are adequate for cardiac control in normal and undiseased hearts but similar values may be associated with depression of cardiac output in the diseased heart.[17]

Monitoring PCW pressure makes it possible to adjust the circulating blood volume to the point on the Frank - Starling curve where myocardial fibers are stretched to provide maximum contractility. In addition to PCW pressure, the cardiac output and cardiac index measurement can be used as guidelines for administration of fluids, or cardiotonics to obtain optimal output.[19]

Much still needs to be learned about the hemodynamic effects of various agents, including digitalis and diuretic agents.

Indications

According to Dr. Swan, the indication for the Pulmonary Artery Catheterization is, "any situation in which a physician would consider placing a central venous pressure line for the purpose of cardiovascular monitoring."[17]

1. Patients who have heart disease and who are undergoing major operative procedures which require large volumes of IV fluids.[13]

The Swan Ganz catheter will give fast and accurate information concerning the patient's cardiopulmonary status and also allow fluid replacement intra and postoperatively with greater accuracy than central venous pressure measurements.

2. COPD and combined cardiorespiratory failure.

Besides right and left heart monitoring with the Swan-Ganz catheter, availability of obtaining mixed venous blood from the pulmonary artery is a great advantage. Patients who have COPD and who are in acute respiratory failure, the mixed venous O_2 saturation is the best index of the adequacy of O_2 administration.[13]

3. Coronary Artery Disease

In patients with coronary artery disease, impaired left ventricular reserve may be present. The stress of a major operation in this type of situation may well precipitate left ventricular failure. The Swan-Ganz catheter is a reliable guide in identifying early left ventricular failure.[13]

4. Thermal Injuries

Patients with extensive burns or smoke inhalation are extremely sensitive to the large volume of fluid infusion which is necessary in burn therapy. These patients may benefit from pulmonary artery pressure monitoring to detect excessive fluid administration which may result in pulmonary edema.[6]

5. Patients in whom massive transfusion may be required.[2]

Monitoring of left heart pressures may prevent fluid overloading.

This type of patient may constitute a high mortality risk. Continuous monitoring of pulmonary artery and wedge

pressure before, during and after operation can aid in the proper treatment and risk assessment.[2]

7. Advanced age.

In elderly patients undergoing surgery with or without evidence of cardiac or respiratory disease, the Swan-Ganz catheter may provide early detection of decompensation.[16]

8. Acute myocardial infarction.

Monitoring PAP and PCWP provides early detection of congestive failure and avoidance of excessive I.V. fluid administration. With the Swan-Ganz catheter it is possible to differentiate the complications of acute myocardial infarction, such as rupture of ventricular septum and/or acute mitral insufficiency due to dysfunction or rupture of a papillary muscle.

Each of these complications of MI may cause acute congestive failure. In the patient with rupture of the ventricular septum, blood samples from right ventricle may provide prompt and reliable diagnosis. In the patient with acute massive mitral regurgatation, giant V waves during systole are often noted in the wedge pressure tracing.[13,15]

Complications

1. Pulmonary artery rupture

Pulmonary artery rupture is the most serious but extremely rare complication of pulmonary artery catheterization. In most of the cases reported, the catheter tip had been advanced to the periphery of the lung with the baloon deflated.[7,13]

2. Pulmonary infarction

Pulmonary infarction is usually caused by persistent undetected wedging of the catheter. Continuous monitoring and frequent evaluation of the pulmonary pressure tracing will prevent this complication.[4,18,22]

3. Arrhythmia

PVCs may occur when the Swan-Ganz catheter passes through the right ventricle. Ventricular occurance of tachycardia or ventricular fibrillation, even cardiac arrest, have been reported.[1,5,18,21]

4. Phlebitis

Swan-Ganz Catheterization may sometimes cause phlebitis. It should be suspected with the appearance of inflamation of the insertion site or fever. In this case the catheter should be removed.[13]

5. Endocarditis

The risk of infection is present with the use of any catheter. This risk can be minimized by using proper sterile techniques in the preparation of the insertion site before catheter placement and by using aseptic precautions while the catheter is in place. Aseptic endocarditis is known to be directly related to thhe duration of catheter placement. Embolization (parts breaking off and traveling in the blood stream to a small vessel where they become lodged) and infection are the only known hazards of this complication.[8,9,14]

6. Pneumothorax

Pneumothorax may be a complication if the subclavian vein is used for insertion of the catheter.

7. Carotid artery puncture

During repeated attempts to insert a large bore catheter into the neck, a hematoma in the neck area may result which can cause peripheral nerve damage.

8. Balloon rupture

Balloon rupture has been reported. The latex balloon absorbs lipoproteins from the blood, causing the balloon to lose its elasticity, thus increasing the possibility of rupture. Rupture of the balloon, because of over-inflation has been observed without any serious adverse effect. Air embolism may result from balloon rupture which could be hazardous to a patient with right to left shunt due to congenital heart disease. Carbon dioxide should be used as the inflation medium to minimize the potential seriousness of coronary or cerebral air embolism.[18]

9. Intracardiac knotting of the catheter.[10,11]

This is an unusual complication. To prevent knotting, an excessive length of catheter should not be inserted. ●

References

1. Abernathy, WS: Complete Heart Block Caused by the Swan-Ganz Catheter. Chest 65:349, 1974.
2. Civetta, JM, Gabel, JC: Flow Directed-Pulmonary Artery Catheterization in Surgical Patients: Indications and Modifications of Technic. Ann. Surg. Dec. 1972, p. 753-756.
3. DeLaurentis, DA, Hayes, M, Matsumoto, T, Wolgerth, CC: Does Central Venous Pressure Accurately Reflect Hemodynamic and Fluid Volume Patterns in the Critical Surgical Patient? The American Journal of Surgery 126:415-418, 1973.
4. Foote, GA, Schable, SI, Hodges, M: Pulmonary Complications of the Flow-Directed Balloon-Tipped Catheter. New England Journal of Medicine 290:927-31, 1974.
5. Geha, DG, Davis, NJ, Lappas, DG: Persistent Atrial Placement of a Swan-Ganz Catheter. Anesthesiology 39:651-653, 1973.
6. German, JC, Allyn, PA, Bartlett, RH: Pulmonary Artery Pressure Monitoring in Acute Burn Management. Arch. Surg. 106:788-791, 1973.
7. Golden, MS, Pinder, T. Anderson, WT, Cheitlin, MD: Fatal Pulmonary Hemorrhage Complicating Use of a Flow-Directed Balloon-Tipped Catheter in a Patient Receiving Anticoagulant Therapy. The American Journal of Cardiology 32:865-867, 1973.
8. Greene, JF, Cummings, KC: Aseptic Thrombotic Endocardial Vegetations. A Complications of Indwelling Pulmonary Artery Catheters. JAMA 225:1525-1526, 1973.
9. Greene, JF, Fitzwater, JE, Clemmer, TP: Septic Endocarditis and Indwelling Pulmonary Artery Catheters. JAMA 233:891-892, 1975.
10. Lipp, H, O'Donoghue, K, Resenekov, L: Intracardiac Knotting of a Flow-Directed Balloon Catheter. New England Journal of Medicine 284:220, 1971.
11. Mond, HG, Clark, DW, Nesbitt, BA, Schlant, RC: A Technique for Unknotting an Intracardiac Flow-Directed Balloon Catheter. Chest 67:731-733, 1975.
12. Mond, HG, Hunt, D, Sloman, G: Haemodynamic Monitoring in the Coronary Care Unit Using the Swan-Ganz Right Heart Catheter. British Heart Journal 35:635-642, 1973.
13. Nichols, AB: Technique of Swan-Ganz Catheterization. Univ. Michigan Med. Center Journal 41:1-8, 1975.
14. Pace, NL, Horton, W: Indwelling Pulmonary Artery Catheters: Their Relationship to Aseptic Thrombotic Endocardial Vegetations. JAMA 233:893-894, 1975.
15. Rotman, M., Chen, JTT, Seningen, RP, Howley, J, Wagner, GS, Davidson, RM, Gilbert, MR. The American Journal of Cardiology 33:357-362, 1974.
16. Samii, K, Couseiller, C, Viars, P: Central Venous Pressure and Pulmonary Wedge Pressure. Archive Surgery 111:1122-1125, 1976.
17. Swan, HJC: Balloon Flotation Catheters — Their Use in Hemodynamic Monitoring in Clinical Practice. The Journal of the American Medical Association 233:865-867, 1975.
18. Swan, HJC: The Role of Hemodynamic Monitoring in the Management of the Critically Ill. Critical Care Medicine 3:83-89, 1975.
19. Swan, HJC, Ganz, W: Use of Balloon Catheters in Critically Ill Patients. Surgical Clinics of North America 55:501-519, 1975.
20. Swan, HJC, Ganz, W, Forrester, J, Marcus, H, Diamond, G, Chonette, D: Catheterization of the Heart in Man with Use of a Flow-Directed Balloon-Tipped Catheter. The New England Journal of Medicine 283:447-451, 1970.
21. Voukydis, PC, Cohen, SI: Catheter Induced Arrhythmias. American Heart Journal 88:588-592, 1974.
22. Yorra, FH: Massive Thrombosis Associated with Use of the Swan-Kanz Catheter. Chest 65:682-684, 1974.

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The Role Of Radiation In Preventing Keloids

David S. Levy, M.D.*

Low-dose superficial x-radiation to the site of surgical excision of a keloid or hypertrophic scar inhibited their recurrence in 54 of 59 patients evaluated (92%). The clinical manifestation of keloids, the physiology of wound healing, the pathophysiology of keloid formation, and the radiation technique utilized are presented. Our results show that this is a well-tolerated, easily administered, and efficient method of preventing keloid or hypertrophic scar formation.

Introduction

Keloids are benign, cutaneous soft tissue lesions which are comprised of thick hyalinized collagen bundles, fibroblasts, and blood vessels.[1]

Some clinicians differentiate between a keloid and a hypertrophic scar. Keloids extend beyond the confines of the original wound; whereas, hypertrophic scars tend to remain within their confines.[2,3] A keloid or hypertrophic scar tends to occur where there is increased skin tension.

They can produce symptoms of discomfort manifested by pruritis and parasthesia. Cosmetically, they are unsightly because they are thick, elevated and hyperpigmented. Both entities have a similar histologic makeup, hence, their treatment can be discussed together.

There are three methods presently used to prevent keloids or hypertrophic scars from developing or recurring. One method employed is surgical excision using meticulous approximation of skin edges with relaxing incisions. This technique has been used by surgeons for many years, although it is often ineffective when used alone.[4]

The first successful regression of a large keloid using intralesional triamcinolone, was reported by Maguire in 1965.[5] Other investigators[5,6,7,8] have shown satisfactory results using triacmcinolone injections following central excision of the keloid. Post-operative radiation has been shown to be an effective method of preventing the formation of keloids or hypertrophic scars.[1,9,10]

Material And Methods

A total of 68 patients were treated by surgical excision of the keloid followed by superficial x-radiation in an effort to prevent keloid or hypertrophic scar recurrence. Best results were obtained when treatment was initiated within 24-48 hours after excision of the keloid.

The recent incision, including all sutures plus a 2 mm. margin in all directions, was enclosed in a lead cutout to protect all normal tissue beyond the margins.

The irradiation was administered using a superficial x-ray unit at a target to skin distance of 35 cm., at 100 kVp and 4 MA with 1 mm. of aluminum inherent infiltration. No additional filtration was used.

A dosage of 300 rads, measured at a depth of 1 mm., was given every other day in five to six fractions over 12-14 days, for a total accumulated dose of 1500-1800 rads. The lower dose was given to light-complexioned individuals; darker-skinned patients received a total dose of 1800 rads.

Patients were seen for followup at varying intervals after completion of the radiation program. However, a minimum of six months of elapsed time post-radiation was necessary to consider the patient evaluable for the study.

Results

Measurements of scar width and thickness were used to evaluate results. A scale ranging from fair-poor to good-excellent was established. On the basis of these criteria, 54 of the 59 evaluable patients scored excellent or good; five patients shows fair or poor results; and nine were lost to followup.

No undue sequelae were observed. Hyperpigmentation was noted in a few patients. In one individual, depigmentation in the treated area was observed. Although we have never encountered or read of a case of neoplasia resulting from this type of irradiation, it should be considered a remote possibility. Careful shielding of younger patients who have keloid or hypertriphic scars near epiphyseal growth centers or other developing vital structures is mandatory.[1]

Discussion

There are three well-recognized phases of wound-healing.[1] Initially, new fibroblasts accumulate in a perivascular nodular pattern around new endothelial buds.

Several days later, the number of collagen bundles increases, still arranged in a perivascular pattern. The final phase results in thickening and disarrangement of the collagen bundles with diminution in fibroblasts and blood vessels.

If the equilibrium which normally exists between the synthetic and degradative phases of collagen metabolism is disturbed, the end result is a greater mass of collagen (i.e., keloid or hypertrophic scar).

Radiation is most effective in the early phases of healing. Since developing endothelial vascular buds are extremely radiosensitive, their growth can be retarded by the judicious use of low dosage irradiation. In addition, new fibroblast proliferation can be decreased by low-dose irradiation, decreasing the amount of collagen proliferation and subsequent keloid formation.[11]

Time dose schedules have varied widely historically, ranging from a single dose to dosage schedules protracted over four weeks. Deigert and Allen[1] reported best results with atraumatic excision followed by irradiation within 1-3 days of excision. This was especially true for lesions about the sternum and deltoid region.

The time dose schedule used in this series has proved to be effective and efficient in the prevention of surgically

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removed keloids. This method of postoperative irradiation is safe, well tolerated, easily administered, and free of undue sequelae.

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Bibliography

1. Deigert, F.A., Allen, K.D.A.: "Keloids: reassessment of irradiation therapy." Rocky Mt. Med. J., 70:35-37, 1973.
2. Koonin, A.J.: "Aetiology of keloids: a review of the literature and a new hypothesis." S. Afr. Med. J., 38:913-916, 1964.
3. Cosman, B., Crikeliar, F.J., Ju, M.C., Gaulin, J.C., Lattes, R.: "The treatment of keloids." Plast. & Reconstr. Surg., 27:335, 1961.
4. Ketchum, L.D., Cohen, I.K., Masters, F.W.: "Hypertrophic scars and keloids-a collective review." Plast. & Reconstr. Surg., 53:140-154, 1974.
5. Maguire, H. C.: "Treatment of keloids with triamcinolone acetonide injected intralesionally." J.A.M.A., 192:325-326, 1965.
6. Griffith, B.H.: "Treatment of keloids with triamcinolone acetonide." Plast. & Reconstr. Surg., 38:202, 1966.
7. Ketchum, L.D., Smith, J., Robinson, D.W., Masters, F.W.: "Treatment of hypertrophic scars, keloids, and scar contracture by triamcinolone acetonide." Plast. & Reconstr. Surg., 38:209, 1966.
8. Murray, R.D.: "Kenalog and the treatment of hypertrophied scars and keloids in negroes and whites." Plast. & Reconstr. Surg., 31: 275-280, 1963.
9. Craig, R.D.P., Pearson, D.: "Early post-operative irradiation in the treatment of keloid scars." Br. J. Plast. Surg., 18:376, 1965.
10. Levine, W., Gillies, H.: "Radiotherapy in the prophylaxis and treatment of keloid." Lancet, 1:440, 1942.
11. Lever, W.: Histopathology of Skin. Lippincott, Philadelphia, 1967.

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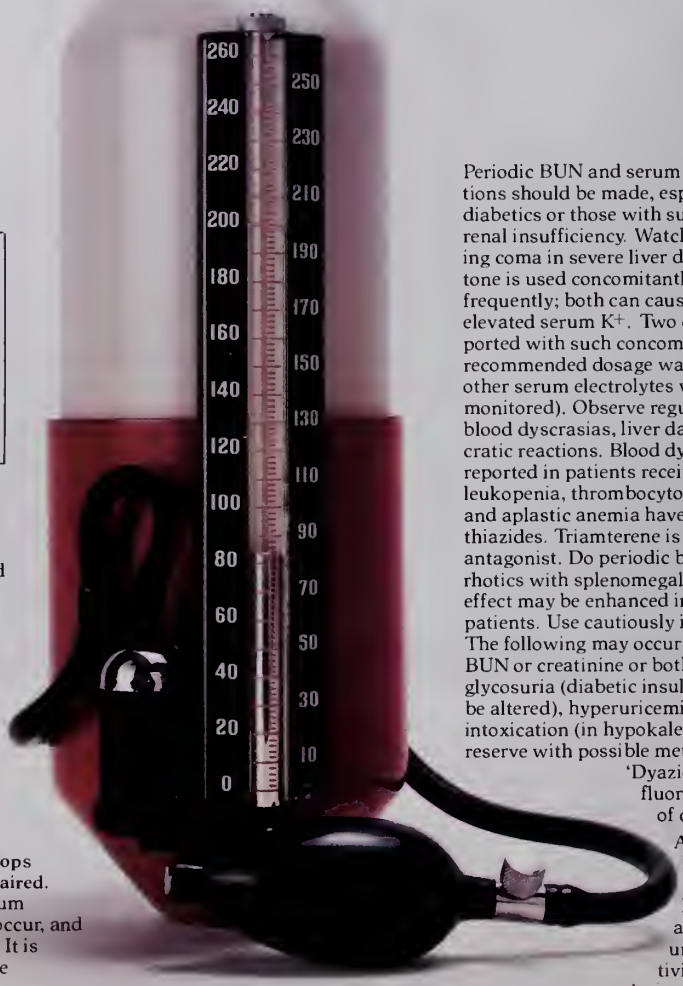
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Alabama Museum of Health Sciences

The Mobile Medical College football team of 1905, from the Alabama Museum of the Health Sciences, Lister Hill Library, UAB. Note the nose guards around the necks of four players, the primitive shoulder pads on one and the rudimentary helmet held by another. The Museum is eager for material to add to its growing collection of photographs, medical and dental diplomas, equipment, writings, and so on, that would bear on the history of the health sciences in Alabama. Pictured at right is a University of Alabama Medical College dissecting room scene about 1905, with a well-worn cadaver. ●

Reynolds Historical Library

CONTINUED FROM PAGE 7

a greater degree than some of those who had the care of families."

One of his colleagues, Dr. William Merril Sosman, Chief of Roentgenology at Peter Brent Brigham, said at the 1958 dedication: "These books became Dr. Reynolds' vicarious children."

A magnificent family they turned out to be, as any visitor to the collection can see.

Dr. Reynolds said of his book collection, "The library is for the use of students of history and science, without any other qualification."

'Historical Continuity'

Dr. Howard L. Holley commented that it is rare for a bibliophile to make his books accessible to others, but Dr. Reynolds was that kind of man. He loved books, Dr. Holley said, first for their content, then, for their author, but most of all, for their providing a means "of historical continuity in the profession."

In 1922, Dr. Reynolds joined the staff of the Harper Hospital in Detroit, where he remained until his death in 1961, three years after the original Reynolds library was dedicated.

He was admired as a man of great brilliance and quiet charm, a gentleman of broad culture. (He served three terms as President of the Detroit Library Commission.)

Although he never returned to his native state to practice, he never forgot it, even during the busy years as a Detroit radiologist, professor of radiology at Wayne State and editor of the American *Journal* of Roentgenology, Radium Therapy and Nuclear Medicine, or President of the American Roentgen Ray Society.

Of his interest in medical literature and all literature, an admirer wrote after his death:

"He knew that medicine is more than a science or an art, or even a happy combination of both. He understood, as few do, that medicine is also a deep current in the broad stream of human culture."

Dr. Reynolds Comes Home

The inscription on the Library, written by Dr. Tinsley Harrison, says in part:

"...Each time one of you reaps from the great minds of the past the desire for finer achievement in your profession and nobler development or your own character, the Reynolds Library will have been rededicated."

Dr. Reynolds was buried in Ozark, in a cemetery he had given the community.

At last he had come home; his beloved books had preceded him by three years. (See related photo → .) ●





This comment on the hazards of eating mushrooms was produced in the first quarter of the 19th Century by a famous medical satirist of the times, Thomas Rawlandson (1756-1827). Many of Rawlandson's colorful prints are included in the Reynolds Historical Collection, Lister Hill Library of the Health Sciences, UAB.



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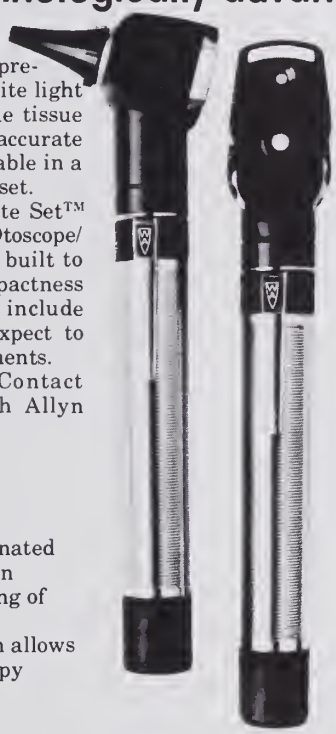


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HOPSCOTCHING TO IMMUNIZATION

During the 1977 AMA Auxiliary Convention, Dr. Albert Sabin's remarks on the current status of immunization in this country and the realization that public apathy might again place our children in a position of vulnerability to certain communicable diseases prefaced the announcement by Dr. Richard Palmer, then AMA President, of a new AMA Immunization Campaign.

What a paradox if the past outstanding success within the United States is virtually eliminating the serious threat of many childhood infectious diseases proved to be a trap to lure us into a too comfortable nonchalance, thus opening the door for the villanous re-entry of polio, tetanus, whopping cough and the like.

Public complacency leading to inertia is possibly the most dreaded disease, and a deadly one at that. How grateful we must be to the medical profession in instituting this timely program to "immunize" the country against the unconcerned false sense of security which often becomes a breeding place for tragedy. It is indeed shocking to learn that 20 million American children under the age of 15 (that is an alarming 40%) are not protected against the communicable diseases.

In many cases, immunization is not required by law prior to entering schools, and how odd that many parents assume that what is not law is not necessary. Therefore, you, the medical profession, have accepted the challenge of educating the populace to the dire need to protect their children against these diseases by proper and timely vaccination.

Dr. Palmer, for the AMA, announced a goal of a 90% immunization level for all children aged 15 and younger by the Fall of 1979. The Auxiliary eagerly and determinedly joins your effort; and, utilizing the materials developed by the AMA specifically for the immunization campaign, we hope to spread your word of warning in the most effective way.

AMA's unique attack on the devil-may-care attitude now prevalent toward vaccination is to appeal directly to the children with the use of a hopscotch theme, the hopscotch court colorfully designed with the names of such diseases as polio, diphtheria, rubella, rubeola, pertussis, tetanus and mumps emblazoned onto the individual squares. "Immunization" has been substituted for the "Sky Blue" at the top of the game.

The message is very obviously "Get Immunized," and it is hoped that once the children's interest is gained, they will carry the ball to the goalpost by encouraging their parents to arrange for vaccination. The hopscotch theme is utilized as a background for various public service announcements or "commercials" to be distributed directly to television stations around the country.

Also included in the AMA package of materials is a five-minute puppet show film intended for use on children's programs, model press releases and model editorials, to name a few, comprising what may be called an outright "media blitz"—all aimed at pricking the national conscience to "Get immunized."

The Auxilians' role in the campaign is to augment the effectiveness of these tools by further infiltrating the message among the communities. The hopscotch theme is such a clever one and designed just so to capture the notice of children that Auxilians intend to broaden its scope by painting the hopscotch insignia on playgrounds of the schools with the use of specially designed stencils (also provided in the AMA kit).

Mrs. Robert White, Community Health Chairman for the State Auxiliary, and I have already altered county Auxiliaries to begin organizing their time and resources to execute the immunization program in their own areas. Mrs. White has also secured a memorandum from Dr. Wayne Teague, State Superintendent of Education, asking each local superintendent's cooperation when approached by our members.

Speaking for Mobile County, I have already received phone calls from several schools requesting that they definitely be included in the program. We feel this campaign is not only necessary to insure the continued good health of our children, but also an excellent public relations tool allowing us to get a foot in the door to introduce other health education programs in the schools, a longstanding goal of both AMA and Auxiliary.

Additionally, Auxilians are lining up guest spots on local talk shows to further bombard the public with the urgent need to attend to its children's immunization requirements. Always seeking new approaches to get the point across, Auxilians are encouraged to submit any new ideas as well as to execute existing ones with enthusiasm and judiciousness.

We strongly urge the members of the Medical Society whose wives do not belong to an organized Auxiliary to encourage them to spearhead programs in their individual communities. They may contact Mrs. Robert White, 71 Kingsway, Mobile, Alabama 36608, for materials and guidelines in this very vital campaign toward 90% immunization.

The Medical Association and the Medical Auxiliary — truly working as Partners in Health.

Helene

MRS. JOHN S. TAYLOR

DIGEST—STATE COMMITTEE OF PUBLIC HEALTH

SEPTEMBER

The State Committee of Public Health, at its regular meeting on Sept. 21, took the following actions:

- Conducted a public hearing and considered revision of the FY77 Alabama Medical Facilities Plan (Title VI). Rejected a request to revise the plan for Area B-2, Montgomery-Lowndes County, to program a sufficient number of additional acute hospital bed to allow a 47-bed addition to Montgomery Baptist Hospital.
- Denied a request of Holy Name of Jesus Hospital, Etowah County, Area I-17, Lee County, East Alabama Retirement and Nursing Home, to revise the plan and permit an additional nursing home of 55 beds in Opelika.
- Approved a request from Area R-31, Conecuh County Hospital, to program 44 beds and permit this facility to reopen. Rejected a request for revision of the plan to program a separate additional nursing home in Alabaster, known as the Briarcliff Health Care Center.
- Approved a recommendation from the Bureau of Health Development that the 30-day notice and public hearing be postponed indefinitely on the draft of the Procedures Manual and Review Criteria for the Certificate of Need program pending further negotiations leading to a firm decision regarding the acceptability of the Certificate of Need program to the Secretary of DHEW.
- Received a revised implementation schedule for the Certificate of Need program.
- Received a status report of nursing homes under the Section 1122 program and a specific report on nursing homes in Tuscaloosa County.
- Approved the initial issuance of Assurance of Need for 13 facilities.
- Approved with favorable findings and recommendations an application from Flowers Hospital, Dothan; Community Hospital, Birmingham; Medical Center Hospital, Huntsville; and St. Vincent's Hospital, Birmingham. Gave an adverse decision on Briarcliff Health Care Center, Alabaster, as not consistent with the Medical Facilities Plan, 1977.
- Concurred in approval of IV Fluid/Drug Supply, Resupply Program applications for 57 ambulance companies and emergency medical services and directed the EMS division to issue appropriate authorizations.
- Approved a request for Developmental Disabilities Construction funds by United Cerebral Palsy of Greater Birmingham, Inc., for a total DDSA funding of $74,000.
- Received a report on Supreme Court decisions and other legal actions during the past month.
- Was advised of the expiration of terms of some of the Statewide Health Coordinating Council members. Fourteen members' terms expire on Oct. 31.
- Approved a Plan for Home Health Services as proposed in cooperation with the Health Systems Agencies.
- Concurred in approval of the HSP No. 1 for the North Alabama Health Systems Agency for 1977-1981 with an amendment to Goal 35, Priority 3, relating to reimbursement for primary care services.
- Confirmed registrars and deputy registrars for Vital Statistics in Baldwin, Clay and Jefferson Counties.
- Received a report on the status of delinquent certificates of death from a Selma physician.
- Referred to the Council on Dental Health proposed guidelines for the operation of a comprehensive dental health program in county health department clinics, policies governing the mobile dental health unit, and guidelines for the operation of a comprehensive dental health program in a dental office.
- Ratified the appointment of Alfred R. Stumpe, M.D., as Mobile County Health Officer for five years beginning Sept. 1.
- Was advised of the election of Dr. Orlando Joyce by Talladega, Cleburne, and Calhoun Counties as District Health Officer.
- Took note of Governor's Executive Order No. 82-A requiring all departments, agencies and commissions of the state which promulgate rules and regulations affecting county or municipal governments to notify the Association of County Commissioners and the Alabama League of Municipalities 45 days prior to the effective date of such rules and regulations.
- Indefinitely suspended the license revocation order for Flint City Nursing Home and authorized a probational license as a result of corrective action by the facility.
- Was advised of the award of a construction contract of a State Health Clinical Laboratory Building on Sept. 6, to Andrews and Dawson Contractors for a low bid of $2,295,348.
- Approved a request from the Advisory Committee on end stage renal disease to expand the membership to include nephrologists in charge of each ESRD installation that is established or will be established in the state. This recommendation would eventually add eight members to the Committee, making the total 15.

OCTOBER

The State Committee of Public Health, at its regular meeting on Oct. 19, took the following actions:

- Received an Environmental Contaminant Report dealing with DDT studies in North Alabama and radioactive fallout resulting from the Sept. 17 Chinese nuclear weapons test.
- Deferred for study for one month the Selected Health Manpower Plan of Action.
- Received information on the Revision of FY77 Alabama Medical Facilities Plan, Title VI.
- Referred to the Legislative Committee a proposal to amend Act No. 1197, designating the State Health Department as the State Health Planning and Development Agency.
- Received a report on the Certificate of Need Program and suggested mechanisms for implementation.
- Approved initial issuance of Assurance of Need for 16 health facilities.
- Reaffirmed resubmission of five bills to be released in the next Regular Session of the Legislature.
- Considered five other proposals which were referred to the Legislative Committee for later consideration.
- Received an information report on the immunization status of school and preschool children.
- Noted the placement of Lorazepam in Schedule IV as a controlled substance resulting from federal action published in the Federal Register on Oct. 7, 1977, effective Oct. 3, 1977.

CME In Your Home CONTINUED FROM PAGE 31

The RCA's SelectaVision is designed to play a rigid, grooved disc 12 inches in diameter and programmed on both sides with 30 minutes of material. The function of the spiral groove is to guide a stylus, much as in an audio-disc system.

The SelectaVision's components are housed in a simple, inexpensive cabinet with a minimum number of controls. RCA disigned a player that could be mass-produced with standard parts.

Care is necessary when loading discs into the SelectaVision, since fingerprints can create interference. The $15 stylus must be replaced after 200 or 300 hours of use. Each disc can be played about 500 times.

The Philips/MCA Disco-Vision uses a tiny beam to scan the spinning disc. Only one side of the disc is programmed with 30 minutes of material. Philips/MCA discs can be handled easily without concern for smudges or dust. Discs should last indefinitely, since there's no wear from playback. The helium-neon laser "stylus" lasts a minimum of 10,000 hours before replacement may become necessary.

One significant difference between the two systems is what is called a "freeze frame" option. The Philips /MCA player enables the viewer to stop the disc's motion to hold one picture frame on the screen. This can't be done with the SelectaVision.

Both the Philips/MCA and RCA expect to offer a broad selection of discs when their players appear. Discs will include new and old films, ballet, opera, theater, sports, how-to children's programs, and documentaries. Discs may also be distributed as entire magazines, catalogs, or talking encyclopedias.

Other video disc marketers, such as TV Disc Corporation of Waltham, Mass., are gearing up to sell lower priced foreign made disc units in 1978. The real race, however, is over who will win the technology battle: MCA with its laser or RCA with its stylus.

What long term effects video discs will have on viewing habits is difficult to predict. So, too, is their potential effect on commercial TV, cable and pay television, theaters, stereo records and education and information storage and retrieval. Home study educators should watch the video disc "revolution" closely to see what uses can be made of this new technology." ●

Erratum

The article by Leon C. Hamrick, M.D., in the September *Journal,* "Health Delivery Cost Control," contained an unfortunate and inexplicable error on page 16. Here is the way it should have read, with the correct word in italics:

"The field of health care is probably more *vulnerable* to inflation in the area of ever-increasing technology and demands and because it is labor intensive; yet it presently compares favorably to other fields in such areas as labor costs."

For one of those uncanny reasons that defy explanation, the word *vulnerable* was changed to *valuable,* totally vitiating the sentence. We apologize to Dr. Hamrick.

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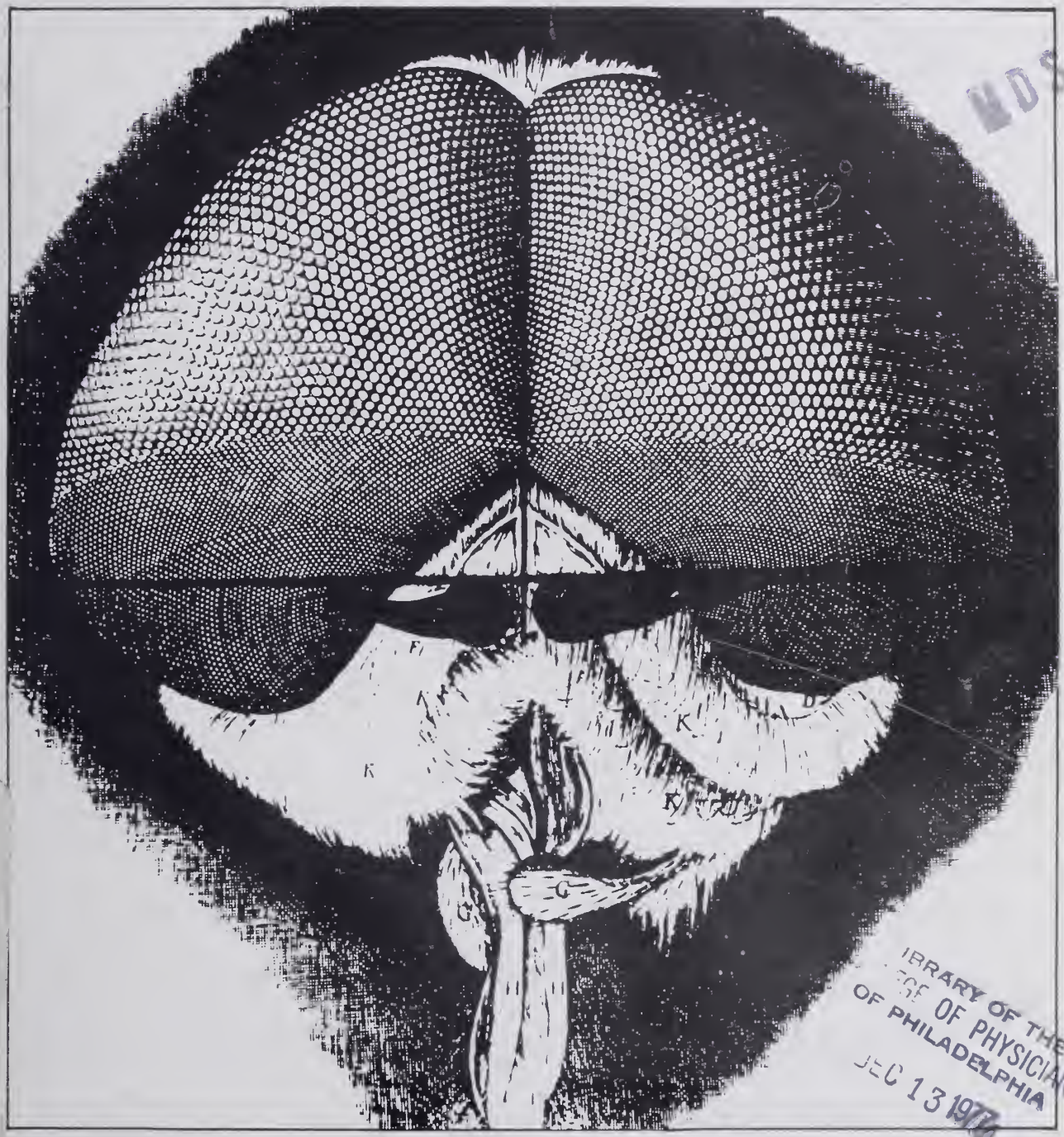
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NOVEMBER, 1977

vol. 47 #5



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Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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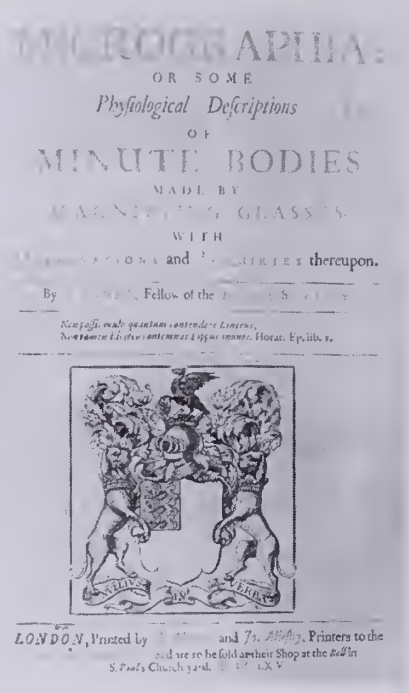
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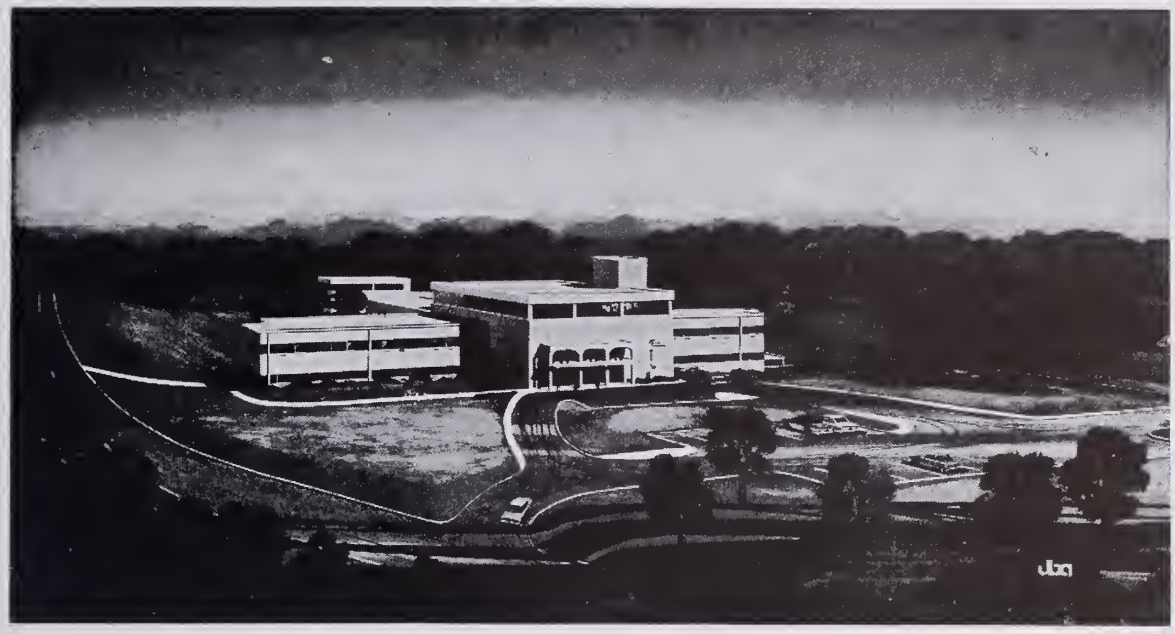

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ABOUT THE COVER

This is a posterized reproduction of an engraving from Robert Hooke's marvelously detailed work, MICROGRAPHIA (title page, left), published in England in 1665. Using one of the most famous of early compound microscopes, Hooke, an inveterate tinkerer and experimental scientist, first described the cell in this book, using that word for the "little boxes" he saw in a thin slice of cork. Familiar to all school boys is his law of elasticity, still current. Among his many feats were: construction of the first Gregorian telescope; first to use a spiral spring to regulate watches; stated the law of inverse squares familiar to photographers; recognized some aspects of the law of gravitation before Sir Isaac Newton. Hooke abandoned many successful but slow-moving experiments, apparently because he became bored. Others profited from his findings, as from this work, MICROGRAPHIA — almost two centuries later German botanists and physiologists confirmed the cell as the basic unit of life. REYNOLDS HISTORICAL LIBRARY.

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19 VIEWS

How do you feel about national health insurance?

The timetable for the Carter Administration's long-awaited introduction of a national health insurance bill points to 1978 as the target year — and 1978 is upon us.

Political insiders, who may have doubted for a time President Carter's resolve on NHI, no longer question it. To counter the notion, fostered by Senator Edward Kennedy and others, that NHI was no longer one of his priority items, the President said this year:

"Sixty other nations have managed to come up with national health programs that meet the needs of their people. It is not beyond our ingenuity to do the same. I want this program to be established during my time in office."

As preface to his expected 1978 action, he directed HEW to hold a series of regional, public meetings on NHI across the country in October. A statement was prepared by MASA for the HEW meeting in this state — Oct. 19 in Birmingham.

The Association's policy concerning NHI was adopted at the annual session in 1976. Simply stated, that position was that, if NHI appeared inevitable, MASA would go along with the AMA bill, which relies on the private sector for insurance coverage.

Obviously, much has changed since 1976. For one thing, the country has a new President. For another, powerful elements of organized labor have now swung firmly behind the Kennedy-Corman bill, the least acceptable NHI proposal in the view of most physicians, a giant stride toward socialized medicine.

Some physicians still cling to the hope that NHI will simply go away, as it always has. It's not likely to do so. Robert M. Ball, a senior scholar at the Institute of Medicine, National Academy of Sciences, Commissioner of Social Security from 1962 to 1973 and the director of the Medicare program during its first eight years, told a *Medical Economics* panel in October:

". . .For the first time, we've got a President who believes in national health insurance, wants it, and has an overwhelming Democratic Congress looking toward a new election. . . . I believe he could do it — and I think he'll try."

Medicine, as American doctors know it, may be at the crossroads. It is no longer sufficient to be merely *against* NHI. Politics is still the art of the possible. Alternatives must be offered.

An updated policy, one consistent with the realities of 1978, is needed in Alabama. Plan to offer your ideas at the caucuses and to attend the annual session in Huntsville in April.

By then, according to Washington reports, President Carter will have offered his NHI proposal.

S. Lon Conner
Executive Director



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo*** —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
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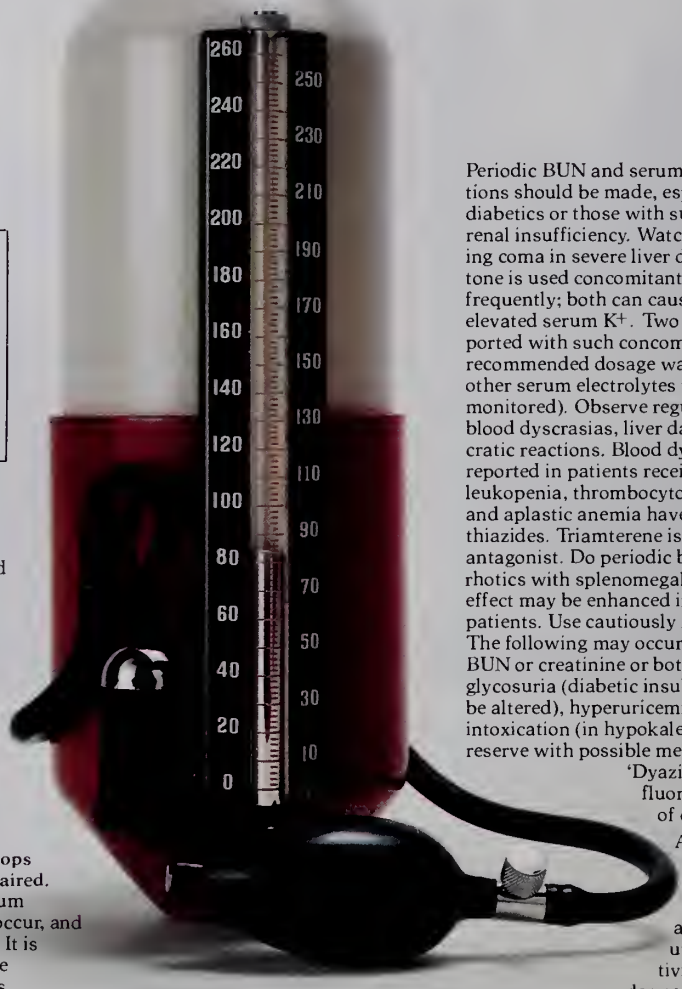
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for vertigo*

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Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

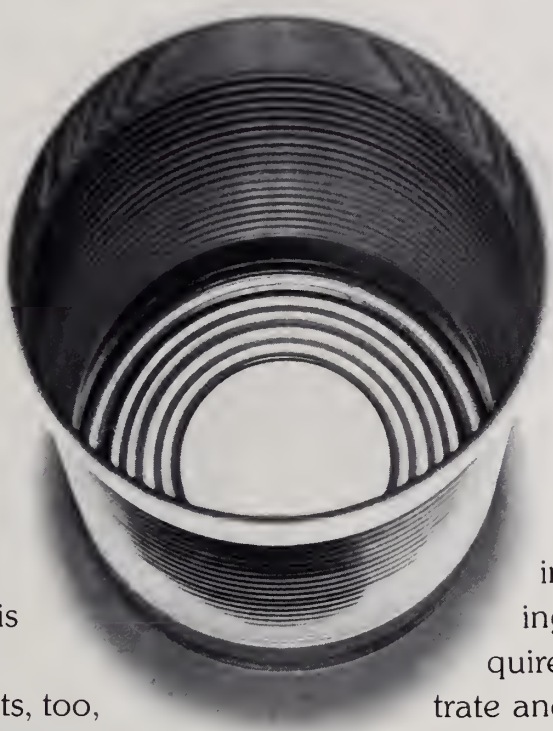
Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

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CONTRAINDICATIONS: Hypersensitivity to acetaminophen or codeine.

WARNINGS: Drug dependence. Codeine can produce drug dependence of the morphine type and may be abused. Dependence and tolerance may develop upon repeated administration; prescribe and administer with same caution appropriate to oral narcotics. Subject to the Federal Controlled Substances Act.

Usage in ambulatory patients. Caution patients that these products may impair mental and/or physical abilities required for performance of potentially hazardous tasks such as driving a car or operating machinery.

Interaction with other CNS depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, tranquilizers, sedative-hypnotics, or other CNS depressants (including alcohol) may exhibit additive CNS depression; when used together reduce dose of one or both.

Usage in Pregnancy. Safe use is not established. Should not be used in pregnant patients unless potential benefits outweigh possible hazards.

PRECAUTIONS: Head injury and increased intracranial pressure. Respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute abdominal condition. These products or other narcotics may obscure the diagnosis or clinical course of acute abdominal conditions.

Special risk patients. Administer with caution to certain patients such as elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, or prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS: Most frequently include lightheadedness, dizziness, sedation, nausea, and vomiting; more prominent in ambulatory than in nonambulatory patients; some may be alleviated if patient lies down; others include: euphoria, dysphoria, constipation and pruritus.

DRUG INTERACTIONS: CNS depressant effect may be additive with that of other CNS depressants. See Warnings.

For symptoms and treatment of overdosage and full prescribing information, see package insert.

Introducing EMPRACET® c̄ CODEINE #4

Each tablet contains: codeine phosphate, 60 mg (1 gr) (Warning—may be habit-forming); and acetaminophen, 300 mg.

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Our new non-aspirin/ codeine analgesic for moderate to severe pain.

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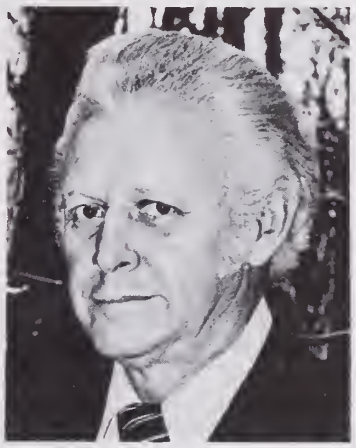
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Pennies For Prescriptions, Billions For Bureaucracy

During the past month I have appeared before two groups to discuss standards of care – one in Anniston and one in Tuscaloosa.

I have met with the Alabama Medical Review board of directors, Alabama's PSRO board, and I have attended two meetings of a newly formed review committee of the Medical Services Administration, the fiscal agency charged with administering the State Medicaid Program.

My general impressions from the month's experience are these:

First, physicians Medicaid contract—the return of charity. On Sunday, Nov. 13, articles appeared in the statewide newspapers notifying Alabama physicians that Medicaid would ask doctors to sign contracts for providing Medicaid services.

When stripped of legalese, the contract states that if you want to provide Medicaid care for your patients, you agree to accept what you get in full payment for services and if Medicaid runs out of funds, you will cheerfully furnish your services for nothing.

For this privilege you will enthusiastically keep whatever records MSA wishes you to keep and you promise to be ethical and honest, and you understand that the contract is not negotiable. I am appalled!

Health Service Areas and consumer groups—From the time the National Health Planning and Resources Development Act, Public Law 93-641, was introduced in Congress as proposed legislation to the present, federal lawmakers and Administration officials have supported the law as a mechanism to promote local health planning within very broad national guidelines.

New national guidelines for health planning appearing in the Sept. 23 issue of the Federal Register make it clear that local HSAs which do not accept goals and established guidelines within the rigid restrictions set by HEW within one year will be denied designation as the HSA for the area in question. The requirements set forth by these guidelines are as follows:

1. A maxium of four beds per 1,000 population in a health service area.
2. An 80% annual occupancy rate in all short-term beds.
3. A minimum of 500 deliveries annually in any obstetrical unit outside metropolitan areas.
4. A minimum of 20 beds in a pediatric unit.
5. An annual occupancy rate in a pediatric unit of 20 to 39 beds, 65%; in a 40 to 79 bed unit, 75%; and in an 80 or more bed unit, 80%.
6. Neonatal intensive care unit, no more than four beds per 1,000 live births annually.
7. Open-heart surgery, a minimum of 200 procedures annually in any institution.
8. Cardiac catherization, a minimum of 300 per year.
9. Radiation Megavoltage, at least 450 new cancer patients per year.
10. CAT scan, a minimum of 2,500 CAT scans per year in any institution.

PSRO—The Board of Directors, of AMR, Inc., has a battle on its hands to protect the physician-patient confidentiality and to avoid becoming a tool of cost containment forces who want limited medical care instead of quality medical care.

The untimate aim of PSRO is to provide information that will establish whether peer review is unnecessary and an absurd expense for the taxpayers to bear or necessary per over-utilization of hospitals by patients and physicians.

Substituting norms and criteria for individual professional judgment is only possible through simple medical problems and simple solutions.

John Rice, M.D.

To thump or

Confusion exists over when, why and how to thump the chest of a victim of cardiac arrest. Recommendations of the National Academy of Sciences/National Research Council, as recently revised, are as follows:[1]

"Continuing research and clinical experience have delineated a role for the precordial thump, but only in specific types of cardiac arrest cases. Recognizing both its limitation and usefulness, the Conference recommends the precordial thump as a basic maneuver to be used by rescuers following the detection of pulselessness in adults in these cases:

1. Monitored patient (advanced life support)
2. Pacing known atrioventricular block (advanced life support)

"The effectiveness of the precordial thump in the unmonitored patient or in an unwitnessed cardiac arrest has not been determined. Since the myocardium frequently may be anoxic in these situations, a specific recommendation for precordial thump cannot be made for them. At this time the precordial thump is not recommended for use on children.

"In cases where the primary cause of cardiac arrest is not hypoxia, such as in a monitored patient, a single precordial thump may be effective in restarting circulation and may reverse certain dysrhythmias if performed within the first minute after arrest. In those situations, an initial thump on the midsternum using the fist may be the first maneuver performed following the determination of pulselessness.

"Such a blow generates a small electrical stimulus in a heart that is reactive. The thump may be effective in restoring a beat in cases of ventricular tachycardia, or ventricular fibrillation of recent onset. When necessary it may be possible to use the fist as a pacemaker in some cases of heart block. When a series of chest thumps are used for this purpose, the pulse should be palpated before each thump.

"The precordial thump is not useful for anoxic asystole and cannot be depended upon to convert an established ventricular fibrillation, nor is it useful for electromechanical dissociation associated with exsanguination. It should not be used for a ventricular tachycardia that is providing adequate circulation.

"The precordial thump should be used to provide a stimulus to a potentially reactive heart. However, it is not a substitute for effective external cardiac compression.

"There are also hazards associated with the precordial thump. In cases of an anoxic heart that is still beating, the low voltage stimulus may induce ventricular fibrillation. In addition, persons who do not restrict themselves to the recommended single blow may delay starting effective CPR.

"In delivering the precordial thump, these rules should be followed:

1. Deliver a sharp, quick single blow over the mid-portion of the sternum, hitting with the bottom, fleshy portion of the fist struck from 8 to 12 inches over the chest.
2. Deliver the thump within the first minute after cardiac arrest.
3. If there is no immediate response, begin basic life support at once.

"The precordial thump is integrated into the basic pattern of CPR differently, depending upon the circumstances surrounding the cardiac arrest. The techniques for using the thump in an arrest of a monitored patient are given below:

"Technique for Witnessed Cardiac Arrest

1. Tilt the head to open the airway and simultaneously palpate the carotid pulse.
2. If the pulse is absent, give a precordial thump.
3. If the victim is not breathing, give four quick, full lung inflations.
4. If pulse and breathing are not immediately restored, begin one-rescuer or two-rescuer CPR.

"Technique for Monitored Patient
(For use with patients who have sudden ventricular fibrillation [VF], asystole, or ventricular tachycardia [VT] without pulse.)

1. Give a single precordial thump.
2. Quickly check the monitor for cardiac rhythm and simultaneously check carotid pulse.
3. If there is ventricular fibrillation or ventricular tachycardia without a pulse, countershock as soon as possible.
4. If the pulse is absent, tilt the head, give four quick, full lung inflations.
5. Check the carotid pulse again.
6. If the pulse is absent, begin one-rescuer or two-rescuer CPR.

"It must be emphasized strongly that no time should be lost in waiting to assess the results of the precordial thump or by delivering repeated precordial thumps."

In summary, the precordial thump should only be used if the patient is on a monitor and ventricular fibrillation or ventricular tachycardia are noted. It may also be useful as a pacemaker in rare cases of heart block, palpating for a pulse after each thump.

Cases have been reported of patients thumping their own chests as they grey-out during the early stages of an acute myocardial infarction. This might be a useful procedure to teach your patients with ischemic heart disease, and to keep in mind for yourself should the need arise.

*John M. Packard, M.D., is Director of Medical Education, Baptist Medical Centers, Birmingham; Clinical Professor of Medicine at the University of Alabama School of Medicine; and Chairman of the Emergency Cardiac Care/Cardiopulmonary Resuscitation Committee of the American Heart Association, Alabama Affiliate.

REFERENCES

1. Standards for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care (ECC). Supplement to JAMA, Feb. 18, 1974, Vol. 227, No. 7, pg. 833-868.

JOHN M. PACKARD, M.D.*

not to thump?

JEFFERSON-SHELBY COUNTY HEART ASSOCIATION BASIC CPR TEST

1. When performing external cardiac compression on an infant:
   a. The compression rate and hand position is the same as for an adult.
   b. Interpose 2 ventilations between every 15 compressions.
   c. Place two fingers over the lower half of the sternum.
   d. The compression rate should be 100-120 per minute.
2. When a foreign body is obstructing the air passage and cannot be removed with finger:
   a. Deliver firm blow over spine between shoulder blades.
   b. Call for a surgeon.
   c. Perform an emergency tracheotomy.
   d. Keep probing in the throat with fingers.
3. Under which of the following circumstances may a non-physician discontinue CPR?
   a. When the rescuer thinks the patient will not survive.
   b. When the rescuer suspects the victim may suffer permanent brain damage.
   c. When the rescuer is exhausted and unable to continue.
   d. When an ambulance attendant states that the victim is dead.
4. If a person is having a heart attack, he will always be having trouble breathing.
   a. True
   b. False
5. The function of the heart is to pump blood in sufficient amounts to meet the varying needs of the cells of the body.
   a. True
   b. False
6. In mouth-to-mouth resuscitation, tilting the head back is important because:
   a. Air cannot enter the stomach.
   b. A tighter seal can be formed around the mouth.
   c. It extends the neck and lifts the tongue away from the back of the throat.
7. Hearing or feeling rib fractures during external compression:
   a. Is an indication to stop CPR.
   b. Indicates hand location should be reassessed.
   c. Indicates the downward force is too much for this victim.
8. If you find a patient not breathing, without a detectable pulse, and you do not know how long he has been there, you should begin CPR.
   a. True
   b. False
9. Blowing a small amount of foreign matter into the lungs is less dangerous than delaying oxygenation.
   a. True
   b. False
10. When rescue breathing on an infant or young child, only small puffs of air should be used. At what rate?
    a. 10 puffs per minute.
    b. 20 puffs per minute.
    c. 30 puffs per minute
11. Approximately how long after an unassisted heart stops beating does it take before irreversible brain damage occurs?
    a. two minutes
    b. four minutes
    c. eight minutes
12. Which of the following is generally *not* considered to be a warning sign of a heart attack?
    a. Pain in the legs.
    b. Squeezing feeling in the chest.
    c. Aching in the arms.
    d. Nausea, sweating and shortness of breath.
13. One of the most common mistakes made in performing mouth-to-mouth breathing is that the rescuer does not hyper-extend the patient's head adequately.
    a. True
    b. False
14. The wrist is the best place to feel for a pulse to determine if the heart is still beating.
    a. True
    b. False
15. CPR should not be interrupted unnecessarily for longer than:
    a. 1 minute
    b. 15 seconds
    c. 5 seconds
16. Depress the sternum for adult external cardiac compression:
    a. ½ to 1 inch
    b. 1-1½ to 2 inches
    c. 2 to 2½ inches
17. The heel of the hand should stay in contact with the chest during cardiac compression because:
    a. Chest expansion with respirations will be easier to feel.
    b. Correct position can be maintained.
    c. Slapping against the chest wall will cause heart damage.
18. Which of these is a good sign during CPR?
    a. Wide open pupils that stay dilated when you expose them to light.
    b. Pupils that get larger when you expose them to light.
    c. Moderately dilated pupils which constrict when exposed to light.
19. What ratio should a lone rescuer use when performing CPR on an adult?
    a. 5 compressions, 1 ventilation
    b. 15 compressions, 1 ventilation
    c. 5 compressions, 2 ventilations →

TO THUMP OR NOT TO THUMP?

d. 15 compressions, 2 ventilations

20. What ratio should two rescuers use when performing CPR on an adult?
    a. 5 compressions, 1 ventilation
    b. 15 compressions, 1 ventilation
    c. 5 compressions, 2 ventilations
    d. 15 compressions, 2 ventilations
21. Sometimes mouth-to-mouth breathing is all that it takes to revive an unconscious person.
    a. True
    b. False
22. What must a rescuer remember when placing a small child in an open airway position?
    a. The child's head should be back as far as possible.
    b. A child's neck is less flexible than an adult.
    c. Forcing the child's head back too far may result in a collapsed airway.
23. Artificial circulation is produced when the chest is compressed and squeezes the heart between:
    a. The clavicle and the scapula
    b. The sternum and the spine
    c. The clavicle and the spine
24. It is dangerous to leave an unconscious person lying on his back with a pillow under his head because:
    a. His airway may become obstructed.
    b. Blood can't get to his brain.
    c. It may be difficult to tell when he regains consciousness.
25. To perform CPR, the initial effort to assure the patient's airway is open should be:
    a. To listen for breathing sounds.
    b. To position the head properly.
    c. To clear foreign matter from the throat.

Answers: 1-d; 2-a; 3-c; 4-b; 5-a; 6-c; 7-b; 8-a; 9-a; 10-b; 11-b; 12-a; 13-a; 14-b; 15-c; 16-b; 17-b; 18-c; 19-d; 20-a; 21-a; 22-c; 23-b; 24-a; 25-b.

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

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ORAL SUSPENSION

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Please see brief summary of prescribing information on facing page.

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Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline; alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy – animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets – 200 mg, 4 times a day; Elixir – two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose – 200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir – bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

CH-GP-51-4/C

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CHOLEDYL®
(OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

ama consultant

THE LATEST TECHNIQUES OF PRACTICE MANAGEMENT

By Karen Zupko, Program Director
Department of Practice Management
Division of Medical Practice
American Medical Association

PAYING TODAY GIVES PATIENTS A PAIN

Has this scene occurred lately in your office?

"Mr. Patient, that will be $25.00 for today's visit," says your medical assistant.

Angry and red-faced Mr. Patient replies, "Well, I've always paid my bill here. Why don't you just send me a statement like you always do?

"Because, sir, this is our new policy," your assistant curtly replies.

Meanwhile, all the patients in the reception room have put down *Newsweek, Ladies Home Journal,* and last year's copy of *Ski* magazine. They are sitting at the end of their chairs, eagerly listening to see how Mr. Patient is going to get out of this and wondering how they'll handle the situation when they're confronted with their bill for your services.

Embarrased, Mr. Patient tells the assistant he doesn't have his checkbook and he leaves with her calling out "But don't forget next time!"

Well, the truth is there may not be a next time. Mr. Patient may decide to go elsewhere for his medical care.

How To Handle It

But this doesn't have to be the case. If your office is one of the many all across the country now asking patients to pay for their office visits on the same day, you can implement the policy successfully and still keep your patients happy by following a few easy procedures.

First, we recommend that you send all of your established patients a letter explaining the new policy. It will help reduce long telephone explanations for your assistants and eliminate the surprise factor that so many patients resent.

Send the letter on your stationery about two to three months before implementing the policy. It might say something like this:

Dear Patient,

Inflation is a growing problem for everyone, including medical offices. Today we find ourselves confronted with ever-increasing costs for almost every supply and service we use in rendering professional care to you.

Rather than raise our fees now, which we may have to do from time to time, we are asking your help in a new cost-cutting plan. Beginning on (give a date two to three months in advance) we will ask you to pay for your office call at the time of your visit. By asking you to do this we can significantly reduce the costs of billing and bookkeeping.

We understand that occasions may arise when it will be necessary for you to ask for a statement rather than paying at the time of service. We also recognize, as we always have, that patients who require extensive treatment may need payment plans.

We wanted to explain this new system to you well in advance because your understanding and cooperation are so important.

Please remember that if you have questions about this or any other policy or procedure we will be pleased to discuss them with you.

We value you, our patient, and will continue to provide you with our best professional care.

Sincerely,
XYZ Medical Office

But your patient relations effort shouldn't stop here. Next, you and your front office personnel need to discuss how firm you plan to be and this varies from office to office.

In any case, your medical assistants need to know what you're thinking is on this topic and be assured that you're going to back them up. (No fair for the doctor to tell patients "not to worry about the bill" if they ask about your fees in the examining room unless you *mean* just that!)

Your medical assistants should also make a point of reminding patients of the new policy when they call to make an appointment. For example they can say:

"Mrs. Black, we have you scheduled for next Tuesday at 2:00 p.m. Your office visit will be $10.00 and any lab work the doctor orders will be extra."

If Mrs. Black says she won't be able to pay, your assistant should probably go ahead and keep the appointment for her and tell her she's making a note of the agreement to send a statement on Mrs. Black's ledger card.

Later, you or your bookkeeper may want to have a private conversation with Mrs. Black if she persists in being an exception to the rule.

Layout Is Important

Office layout and design also play a part in making this policy work successfully. It's going to be much easier, if you have a separate check-out counter, away from the reception room or an area that gives your assistant and the patient some degree of privacy.

How should your assistant ask for payment? That depends on you. Offices taking the more flexible approach simply have the assistant say, "Mr. Patient, your visit today is $15.00" or, "Mr. Patient, your visit is $15.00 and we invite payment today."

The office that is willing to take a more aggressive approach has the assistant say, "Mr. Patient, your visit today is $15.00. Would you like to pay by cash or check?"

Now, what happens if the patient says, "Gee, you know I always try to come prepared, but today, I forgot my checkbook." That's going to happen sometimes, and your assistant should be prepared. She should say, "Miss Patient, that's okay, we understand, here's your statement and an *envelope*, please mail your payment, just as soon as you can."

Most offices report that they receive payment in a few days, without ever having to send a bill. You might make that return envelope a color so it's easy to spot when the payment comes in.

The important thing to keep in mind about asking for payment at the time of service is good patient relations and that you're going to have to make exceptions. ●



Dr. Curtiss's

During this interview, Dr. Curtiss was interrupted by his secretary, who had just received an advance copy of yet another publication featuring him as its lead story—'Quest/78,' a new quality magazine devoted to the "pursuit of excellence" in the world. Dr. Curtiss contemplates his picture made by the photographer who illustrated the best-selling book, 'Jonathan Livingston Seagull.'

BY WM. H. McDONALD

Some of the national alarm appears to have subsided now, but for a time even the most rational American might have thought the microbiologists of the world were plotting to redesign all life on the planet earth, creating all manner of monsters.

Back in the spring and summer, sensationalized headlines in newspapers and magazines screamed:

NEW STRAINS OF LIFE — OR DEATH

SCIENCE THAT FRIGHTENS SCIENTISTS

MAN-MADE BACTERIA COULD RAVAGE EARTH.

Even the country's largest newsmagazine, *Time,* which professed to deplore this tabloid journalism, indulged in some scare tactics of its own. The issue for April 18 was obviously designed to alarm: "The DNA Furor — TINKERING WITH LIFE."

Just before that issue appeared, at a forum of National Academy of Sciences in Washington, unruly opponents of genetic research chanted, "We shall not be cloned," and unfurled a banner reading: WE WILL CREATE THE PERFECT RACE — ADOLF HITLER.

Enter Politics

Political leaders were quick to react to the excitement.

Appearing before a Senate subcommittee on behalf of President Carter, HEW Secretary Joseph Califano asked Congress to impose federal restrictions on recombinant DNA research — that relatively new form of genetic inquiry involving *Escherichia coli (E. coli* for short), a lowly microorganism familiar to every medical student over the past couple of generations.

Time was fairly typical of that segment of the press that likes to call itself responsible. While deploring the unthinking emotionalism, it contributed to it, in such sentences as this (in addition to that scare-mongering cover):

Little Critters

"...They (microbiologists) may well be creating new forms of life different from any that exist on earth."

But it was not all pandering to popular fantasies about mad scientists creating strange creatures or recklessly fooling around with microorganisms that could, alarmists said, escape the laboratories and bring contagion or worse to cities.

The scientists themselves were polarized as never before since 1939, when a handful of physicists asked their colleagues to stop publishing atomic data to prevent the information from falling into German hands.

Sen. Edward Kennedy, no stranger to the uses of public outcry, proposed severe restrictions on DNA research, with penalties for erring scientists. Secretary Califano, speaking for the Carter Administration, concurred: "There is no reasonable alternative to regulation under law."

Those who favored ending or drastically restricting DNA research had some notable scientific voices for support; the world community of scientists was bitterly split.

CONTINUED ON PAGE 24



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TO ORDER: Write Order Department, American Medical Association, 535 N. Dearborn, Chicago, IL. 60610. Please specify title, OP number, and include payment with your order.

Publications

1 **The Business Side of Medical Practice** (OP-410) $2.00
Guide to basic management principles. Includes: deciding how to practice; selecting a location; setting up an office; financing; legal hurdles; insurance; mechanics of providing good medical service; billings and collections; human relations.

2 **Planning Guide for Physicians' Medical Facilities** (OP-439) $2.00
Provides guidelines and general principles to help you determine the criteria for selecting a medical office that best suits your needs. Includes: basic planning before building; office construction, inside and out; your office interior; office condominiums.

3 **Medicolegal Forms with Legal Anaysis** (OP-109) $1.25
Contains medicolegal forms, with legal analysis and citations of court decisions, for the more common interactions between patients and their physicians and hospitals, such as: consent and informed consent; patient's right to privacy; confidentiality of records; physician-patient relationship.

4 **Preparing a Patient Information Booklet** (OP-441) $.30
A guide for preparing a general information booklet for your patients on your specialty and type of practice.

5 **Talking with Patients** (OP-450) $.30
Provides proven psychological principles and specific examples on how to improve office-patient relations in telephone communications.

6 **Medical Collection Methods** (OP-448) $25.00
A "how to" cassette/workbook program designed to train medical assistants in the most effective collection techniques.
Extra Workbooks (OP-449) $2.00 each

7 **Professional Corporations in Perspective** (OP-102) $3.25
1977 publication which features: economic factors, advantages and disadvantages of incorporation; effect of ERISA on professional corporations; choosing a retirement plan; and managing a professional corporation.

8 **New Doctor's Kit** (OP-458) $10.00
Contains: **The Business Side of Medical Practice; Planning Guide for Physicians' Medical Facilities; AMA Publications Lists; Group Practice Guidelines; Current Procedural Terminology** order form; Uniform Health Insurance Claim Form; **Medicolegal Forms; Talking with Patients; Preparing a Patient Information Booklet;** AMA membership information; Placement Service; and bibliography on billing systems, recording keeping systems, etc.

9 **Group Practice Kit** (OP-457) $7.50
Contains: **Group Practice Guidelines; Professional Corporations in Perspective;** medicolegal reprints on such subjects as: professional liability, confidentiality, informed consent, etc.; samples of model legal agreements for a physician and employed associate, office sharing, medical partnerships, and forming a corporation.


"...Sleep that knits up the ravell'd sleave of care..."
– WILLIAM SHAKESPEARE, MACBETH, ACT II, SC. 2

Insomnia
a shade of blue that often accompanies depression

And, in anxiety/depression, Adapin® (doxepin HCl) often helps restore disturbed sleep patterns, such as early morning awakening, with a single daily dose at bedtime.[1] Adapin quickly relieves the patient's anxiety, gradually brightens his mood and outlook, with optimal antidepressant response usually evident within two to three weeks.

1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

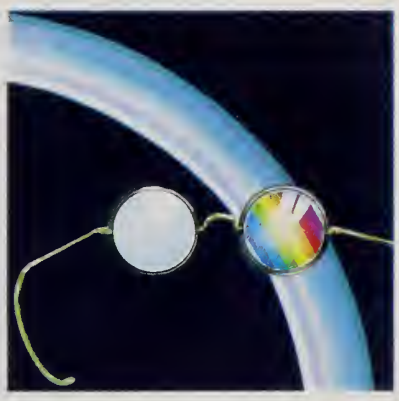
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

How Supplied—Each capsule contains doxepin, as the hydrochloride: 10 mg, 25 mg and 50 mg capsules in bottles of 100 and 1000.

For complete prescribing information please see package insert or PDR.



When they see life in shades of blue... help them see life in all its colors.

Adapin®
(doxepin HCl)

single daily dose recommended h.s.



10-mg capsules
25-mg capsules
50-mg capsules

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THE ANXIETY-SPECIFIC.

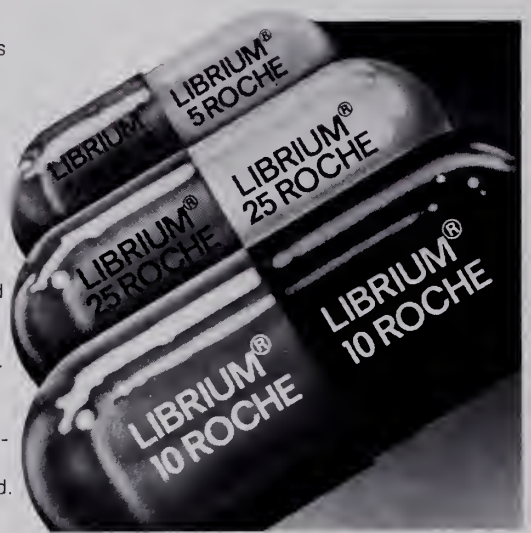
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- three dosage strengths meet most patient needs

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chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.;* severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

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*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.



Dr. Curtiss's Little Critters

CONTINUED FROM PAGE 17

Caltech's Biology Chairman, Robert Sinsheimer, said: "Biologists have become, without wanting it, the custodians of great and terrible power. It is idle to pretend otherwise."

The customary deference of one scientist for another seemed to vanish as they began lashing out at each other. James Watson, who shared with Francis Crick a Nobel Prize for defining the double-helix structure of DNA (deoxyribonucleic acid) slipped into four-letter Anglo-Saxon for his description of those scientists who wanted to limit DNA research.

In some famous institutions of this country, fellow scientists weren't speaking.

The Student Of E. Coli

In the eye of this politico-scientific storm is an eloquent, often witty, microbiologist at UAB, Roy Curtiss III, Ph.D. (University of Chicago 1962. His dissertation: The Genetics of *E. coli* K-12.)

Dr. Curtiss's frequent witticisms belie the easy stereotype of the cloistered scientist he may appear — with his long, dark beard.

Dr. Curtiss has devoted his professional life to studying *E. coli,* but his is not a smugly paternalistic or proprietary view. In 1974, after other scientists sounded some alarms about the possible biohazards of microgenetic research on *E. coli,* it was Dr. Curtiss who really blew the whistle.

That was in a 16-page, internationally circulated memorandum to the eminent Biochemist Paul Berg, who had led a renowned group of scientists in their alarm stated in an open letter published in *Science* and the British journal *Nature.*

They had asked all researchers to honor a temporary ban on certain types of recombinant DNA experiments considered potentially the most dangerous, those involving animal tumor viruses and those increasing drug resistance or toxicity in bacteria.

Dr. Curtiss expanded on this warning in a detailed, scholarly treatise that has now become a kind of classic for that period in DNA research.

In his meticulous warning, he urged a halt to experiments designed to create new combinations of DNA in *E. coli.* *

Last April, three years later, Dr. Curtiss wrote a letter almost as long, this one addressed to Dr. Donald Fredrickson, Director, National Institutes of Health, and distributed to 2,000 scientists worldwide.

In a language comprehensible only to microbiologists, Dr. Curtiss said, in substance, that he believed recombinant DNA research on *E. Coli* could safely resume in most areas, (although he still has doubts about others).

Where did it all begin? First, perhaps, where did Roy Curtiss III begin?

Agriculture At Cornell

He began life May 27, 1934, in New York City's Columbia Presbyterian Hospital. He remained in New York state until the age of 23, earning his B.S. in Agriculture at Cornell in 1956. (While there he did research on, of all things, wartime K rations.)

The Ph.D. in microbiology was conferred by the University of Chicago in 1962, launching him on a career that now has him identified as one of the world's foremost authorities on the potential, hazards and capriciousness of *E. coli* — "this favorite workhorse of microgenetics and microbiology in the past 25 years."

Dr. Curtiss was asked to put the present controversy into historical context. He obliged. The following is his capsule history of "the little critter," as he sometimes calls *E. Coli.*

"Let's go back. *Escherichia coli* was a bacterium common to the intestinal tract that was isolated and described by the German bacteriologist Theodor Escherich in 1885.

"This organism became the microorganism of choice in looking for fecal contamination of food and water. A lot became known about it because it was a convenient indicator. It was, by and large, a nonpathogenic commensal and people ran into it all the time when they were looking for enteropathogens like *Shigella* and *Salmonella* in stools.

"The particular strain of *E. coli* that has been useful in microbial molecular genetics is called *E. coli* K-12, which was isolated from a human, actually a diphtheria patient, male, in 1922 at Stanford (University) Hospital. I sometimes wonder why they took a stool specimen from a diphtheria patient. That indicates to me that Stanford has come a long way since 1922. They apparently were doing every conceivable test even in those days, maybe.

"That strain of *E. Coli* stayed in the culture collection. It was used in labs to train medical students to identify *E. coli* as opposed to other microbes.

"Then in the mid-40s, during the second world war, an eminient radiobiologist from Great Britain, a man by the name of Grey, came to work with Ed Tatum, to examine whether ioniz-

*In the middle of a highly technical discussion, he threw in this line: "Clearly, that would be one hell of a virulent infectious agent."

On another page, he wrote of the genetic, physiological and molecular details of conjugal transfer in E. COLI and commented: "...I personally consider that E. COLI'S capabilities in these activities to probably be unequaled by any other living organisim (including even bedbugs)."

ing radiation, X-rays, would indeed cause mutational alterations of bacteria.

"In other words, Grey and Tatum wanted to repeat Muller's classic studies, which had shown that X-rays caused mutations in the fruit fly *Drosophila.*

"They were successful in isolating mutants of *E. coli* K-12. They were unable to synthesize various amino acids, vitamins and what not.

"Most strains of *E. coli* will grow on just good old mineral salts and glucose. They can make everything they need.

"After verifying that *E. coli* could be mutated by ionizing radiation, Tatum went to Yale.

Medical Student Defects

"About that time, Joshua Lederberg, who was a medical student at Columbia, decided he didn't want to become a practicing clinician, dropped out of medical school and went to Yale to work with Tatum.

"He wanted to determine whether bacteria, like higher organisms, had some sexual means of transmitting genetic information one to the other.

"He was able to use these mutants that Grey and Tatum had prepared to show that, indeed, *Escherichia coli* K-12 was capable of gene transfer by a process called conjugation.

"Lederberg and Tatum reported their results in 1946. Grey and Tatum reported in 1944-45.

Bacterial Viruses

"And so, during the late 40s, a number of people started to take hold of these initial observations and it became popular to commence to do genetic studies on the bacteria *Escherichia coli* K-12.

"During the same time, during the 1940s, there was a group of researchers working with the viruses of bacteria, mainly the bacterial viruses, and this group was also working with viruses that affected *E. coli.*

"At the end of the 40s and into the 50s, you had a confluence of scientists, whether they worked with bacterial viruses, the genetics of bacteria, or the biochemistry and physiology of bacteria — all beginning to focus on one particular organism, *Escherichia coli* K-12.

"So during the period since 1950 and the discovery of DNA, or deoxyribonucleic acid, as the hereditary material, you had a whole bunch of people working with one organism. Consequently, we think no more about that organism than we do even about ourselves.

"This little critter has provided us a lot of information. It's allowed us to speculate on our own functioning and malfunctioning and that of other higher organisms and has led to testable approaches, the development of techniques that, with modification, are applicable to a number of other studies.

"A lot of the study of bacterial viruses has led to this huge burst of activity in studying viruses that affect man.

"A lot of those techniques are just adapted from techniques developed with a bacterial viruses.

"They say that everything has a flea and a flea has a flea — well, every organism has viruses, whether they be animals, plants, insects or bacteria. And bacteria have viruses just like we do; they go through infectious cycles. We have a great diversity of types of viruses that infect bacteria, some of them setting up a symbiotic relationship between the genetic information of the bacterial host and the virus by a process called lysogeny, which is analogous to the situation with latent animal viruses or oncogenic viruses where the genetic information becomes associated with oncogenic chromosomal material of the host organism in the case of rodents or birds, where tumor viruses are well known — not so well known in the case of humans.

"Bacterial viruses are interesting in their own right. They provided the model information for many of our present studies on viruses in higher organisms. But viruses also contain genetic information which is some-

→



times of particular importance to a given bacterial infectious disease.

"For example, in diphtheria, the production of the toxin, which really causes the difficulty, is due to genetic information in a bacterial virus — not in *Corynebacterium diptheriae.*

"A *Corynebacterium* without a phage, which is called Beta, in the lysogenic state, will be non-toxigenic and will be these things called quote, dipthoids, which all of us have in our throat all of the time, or most of the time.

"It turns out that the toxins from all of the clostridia are due to the presence of bacteriaphages in the clostridial bacteria, the ontogenetic information of the clostridia.

"It is very clear now for tetanus, it's a little less clear for botulism, it seems to be so for some of the others.

"So bacterial viruses can make a distinct contribution to the virulence of a given bacterial pathogen."

(The above was something of a digression, or prolonged aside. Dr. Curtiss had been asked to expand on bacterial viruses. The narrative on DNA resumes.)

One Organism

"Back to the 1940s. A number of studies conducted by a number of bright people who, because of circumstances, began to work a lot on essentially one organism, and its viruses — *E. coli* and particularly the strain *E. coli* K-12 — that had been isolated from this patient at Stanford way back in '22.

"At that time, the serology was very poor. They just had an isolate stoked away and maintained in pure culture — at least we assume it was always pure culture. About this time, you had the classic studies of Avery at Rockefeller who showed that DNA was the hereditary material, and this was still debated. They thought the proteins, because of their great diversity, might specify hereditary traits.

"Then in 1952, or thereabouts, Hershey was able to show that bacterial viruses, which are composed of DNA in a protein coat, left their protein coat outside of bacterial cells during an infection and only introduced the DNA — and that pretty well clinched it.

"Then people began to recognize that DNA was more than likely the staff of life and allowed for the reproduction of the organism.

"Then, of course, Watson and Crick in 1953 came up with their structure of DNA, which provided a detailed model of DNA an implied a mechanism by which the DNA could be faithfully reproduced so that one molecule could generate two identical progeny molecules — and also provided a molecular basis, or the suggestion of a molecular basis, for the process of mutation.

"That is, we are aware that genetic material, although very faithful, is also subject to error, and occasionally there is a change in the sequence of constituents, and this change leads to a mutation.

"So from 1953 to the present time, using *E. coli* K-12 and its bacteriaphages, we've learned a lot about gene expression, gene structure, modes of gene transmission among microorganisms and provided a fundamental understanding of the area of molecular biology, at least in bacteria, that allows us to explain a lot of things but which has not been applied to the full extent — say, to higher organisms so that we still don't understand the operative mechanism for turning genes on and off in humans and why certain genes that are present in every cell in the body only work in the liver and not in the muscle and other genes vice versa, and things of that sort. That'll be the next 10-15 years, I guess.

Antibiotics Resistance

"Let's continue on with a couple of other discoveries and observations which will lead us up to the recombinant DNA technology.

"I think you are well aware that in the 40s we also had the introduction of the diversity of antibiotics and these seemed to be just the solution to all manner of problems in controlling bacterial infectious disease.

"The wonder drugs, as some people would argue, contributed immensely to our success in World War II and have been a boon to contending with bacterial infectious diseases in the medical profession since the mid-40s.

"But it became apparent in the mid-50s, that at least in certain parts of the world, we began to come across bacterial pathogens that were resistant to antibiotics and, indeed, in Japan, around 1956, or thereabouts, strains of *Shigella* were observed that were resistant to chloramphenicol, tetracycline, streptomicine, and the sulfonamides.

"This became very bad around 1959 when they had some very large epidemics in Japan with drug-resistant *Shigella.* The people there were able to show that this trait of multiple antibiotic resistance could be transferred from one bacterial cell to another by conjugation.

"In other words, drug resistance could be transferred from *Shigella* to *E. coli,* or from *E. coli* to *Shigella.* And later it was shown that these traits could get around quite well.

"Now in a number of studies that were done in the 60s, it was shown that this multiple antibiotic resistance was due to genetic elements called plasmids, which turn out to be rather ubiquitous among microorganisms.

"And, since the 40s, the frequency of bacterial isolates with plasmid-mediated drug resistance has been increasing tremendously and is the basis for a lot of our current problems in contending with various bacterial infectious diseases.

"Most people are aware that these plasmids conferring antibiotic resistance have now gotten into *Neisseria gonorrhoeae*, where we have ampicillin-resistant strains of gonorrhea that are very much on the increase in the past 12 months in this country and abroad.

"And we now have *Hemophilus influenzae* strains that are resistant to ampicillin, chrloromphenical. And, of course, *H. flu* is a principal problem with infections of childrens — meningitis and other problems.

"We just had a report from South Africa showing multiple antibiotic resistance in *Streptococcus pneumoniae* which most likely is going to be plasmid-mediated. And if the streptococcicides break to the point where you can't treat with penicillin anymore for pneumonia—and various hemolytic streps—this is going to pose a real problem in the control of infectious disease. CONTINUED ON PAGE 52

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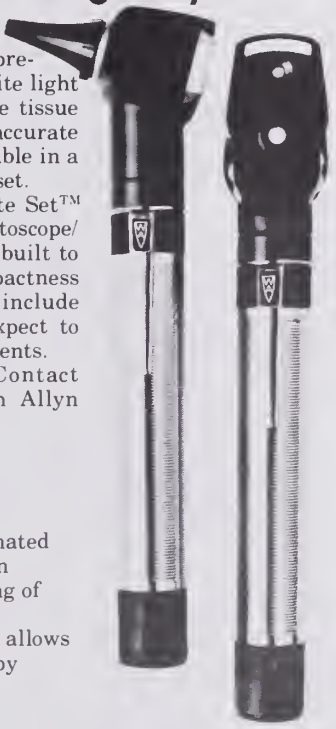


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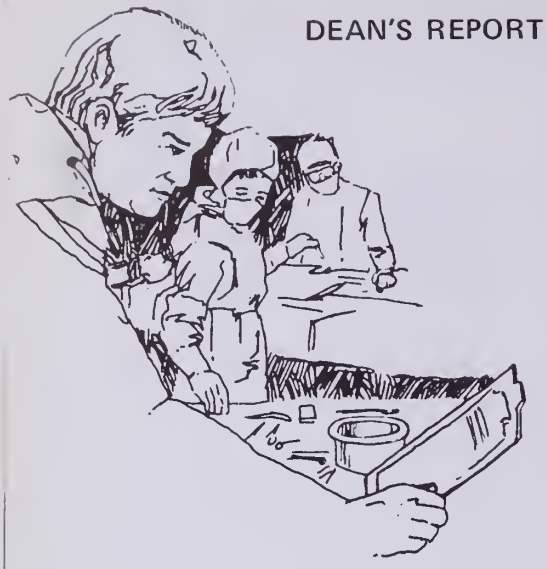
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Quo Vadis Internal Medicine

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Internists (general and specialized) provide a great deal of the primary patient care in this country. However, regardless of the reasons most Departments of Internal Medicine have not properly prepared their trainees for the responsibilities and challenges of a primary care practice.

The discrepancy between the needs of this country for physicians trained in primary care and the output of highly specialized internists by Departments of Medicine has recently been documented. The current emphasis on training primary care physicians and the emergence of strong, well-funded Departments of Family Practice is directly attributable to public and federal awareness of the defects in our health care delivery "system" that have surfaced while the biomedical research community and the medical schools of this country have prospered, the numbers of graduating physicians have increased and startling advances in our understanding of disease have occurred.

To be specific, most Departments of Internal Medicine have neither monitored nor tried to influence the career decisions of its trainees, but instead have permitted the heavy federally supported medical subspecialties to divert and distort the balance that is necessary to provide for both optimum primary and subspecialty health care delivery.

Not Either-or

While it may be argued whether Family Practice training programs and the Family Physician model are appropriate, they have developed partly in response to the perceived deficit of primary care in our health care delivery system. It is my opinion that it is not a question of either Family Practice or Internal Medicine since both may be appropriate depending upon geographic needs.

However, based on the past performance of Internal Medicine, it is highly unlikely that any manner of argument, regardless of its eloquence or logic, will effectively blunt the new emphasis on Family Practice training. Let us make no mistake in interpreting the signs: If Departments of Internal Medicine cannot demonstrate their ability to produce internists who can function effectively and happily as primary physicians, then the central role of Internal Medicine in Medicine and the educational process will be assumed by Departments of Family Practice.

Furthermore, the importance of traditional Departments of Medicine, as opposed to conglomerates of subspecialty groups, will surely decline and they may well become vestigial. Without its central role Internal Medicine will truly become a holding-company of one related subspecialties. The role of such subspecialties and the numbers of subspecialties to be trained will be determined not by Internal Medicine, as has been done in the past, but by those programs that maintain a broad perspective in health care delivery. It is therefore not simply a question of maintaining the status quo with respect to training in Internal Medicine but being responsive to health care needs.

A failure to develop appropriate training programs will result in diminishing support of Internal Medicine. If Internal Medicine is able to demonstrate self-regulation it will not be guaranteed self-determination but the likelihood that it will be delegated both the responsibility and authority for control of the size, extent and content of its program will depend to a large extent on its performance and, in the final analysis, its credibility.

The Pendulum Swings

The current intense interest in primary care is a result of a well designed federal educational program similar to one of 1950s and 1960s extolling the virtues of biomedical research. During this current period of stress, Internal Medicine must demonstrate its ability to be flexible if it expects to survive to ever see the pendulum swing back from the current preoccupation with primary care to a balance between primary and subspecialty education. The development of contrived programs in Departments of Medicine which emphasize primary care/ambulatory medicine or the creation of small Divisions of General Internal Medicine will fool neither the students nor those agencies that will monitor the output of such programs.

The viability of Divisions of General Internal Medicine, which are currently being created within many large and highly subspecialized Departments of Medicine (which are usually hostile and/or indifferent to General Medicine), must be open to question unless departmental chairmen are determined and dedicated to the goal of producing highly trained general internists.

Unfortunately, there appear to be responsible individuals who do not believe that a threat to Internal Medicine exists, are not concerned by the threat or who are responding in a cavalier and superficial manner. Many believe that the threat is temporary and are developing token programs simply to quiet the critics until the storm blows over. Unfortunately, the current enthusiasm for more and better primary care physicians is not likely to wane quickly and misinterpretation of the signs, at this time, could well be disastrous.

Internal Medicine must be prepared to respond as a unified community to these challenges since a significant division of opinion without our ranks or a perceived indifference to the problem will make all of Internal Medicine more vulnerable to attacks which are sure to come from many quarters (state and federal agencies, critics of subspecialty medicine, etc.).

Dubious Prosperity

During the 1960s, when both propaganda and NIH funding patterns fostered the development of strong subspecialty divisions or sections with highly specialized training programs, our Departments of Medicine seemed to "prosper." Certainly, if budget is used as a criterion, such Departments must be considered successful.

Unfortunately, in many instances such Divisions developed at the expense of the Department and cohesiveness and unity of purpose were frequently the price that was paid. Thus, while Departments of Medicine were riding the crest in one direction, the climate of opinion changed almost 180 degrees.

We are now asked to overcome a sizeable momentum towards greater specialization by emphasizing a more general approach and we find that the motivation, orientation and preparation of our faculty often makes them unsympathetic and unresponsive to such demands. It will be difficult, if not impossible, to reorient our highly specialized faculty to these new objectives unless there is a strong, sincere and concerned leadership.

There is nothing inconsistent with (1) continuation of the tradition for excellence in biomedical research which has been established in the past 2-3 decades and (2) producing highly trained general internists who have had adequate experiences in ambulatory medicine and other specialties important for good primary care. Nothing need stop such a two-fold program except the preconceived specialty oriented attitudes that have forced us into a situation where the primary of Internal Medicine is being seriously challenged.

In the past, we have repetitively demonstrated our resourcefulness when confronted with changes in the funding of biomedical research and we have taken advantage of presumably unfavorable mechanisms to maintain the viability of the scientific establishment. It is inconceivable that such resourcefulness can not now be marshalled to cope with our current problems. If Internal Medicine is not careful it may not only lose its central position in medicine but also the best students to other disciplines.

If Internal Medicine does not solve these problems, others will. The gauntlet is down. Will Internal Medicine pick it up or will it simply fold up its tent and fade into the night? ●



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The Community Medicine Clerkship, A Cooperative Effort

Robert F. Gloor, M.D., M.P.H.*

With the development of the College of Community Health Sciences at Tuscaloosa in recent years, an innovation has been introduced in medical education in Alabama, the community medicine clerkship. In use elsewhere, this clerkship has become an important component of the medical educational program in Tuscaloosa.

While the preceptorship concept is not new to Alabama and those who have been involved in such efforts over the years deserve much credit, the concept of community medicine is fairly new to the state. Community medicine is concerned with the problems of health in communities and groups of people. The focus is on the group rather than the individual and on the development of solutions to group health problems rather than on the treatment of a diseased patient.

With such a philosophy, an eight-week required clerkship in community medicine has been established in the Tuscaloosa Program and 14 students have participated in this experience to date.

Because of the College's emphasis on rural medicine, rural communities serve as sites for this clerkship. The role of private family physicians in their communities makes them the logical persons through whom the medical students should be introduced to the communities. Thus, working with these field faculty, the students are afforded the opportunity of participating in the practice of medicine in the community.

First Exposure

While family medicine and community medicine are separate entities, this involvement of the family physician in the community medicine education of the medical student enhances the clerkship in that the student is now exposed, usually for the first time, to medical practice away from a medical center. The future doctor participates in the clinical care of patients under the community physician's supervision, making decisions concerning patient management, arranging referrals when necessary and assisting the physician in caring for patients in the hospital or nursing home.

The student becomes involved in after-hour care as he joins the physician on call the local hospital. This clinical orientation at the primary care site is compared and contrasted with that obtained in the medical center.

Another important aspect of this phase of the clerkship is the introduction of the student to office management. The contribution of non-physician personnel to the efficient operation of the office is noted. The student learns the problems associated with third-party payment mechanism. The legal implications of the practice of medicine and the manner in which the possibility of malpractice suits influences the handling of patients' problems are observed by the student.

By joining the physician in medical society and hospital board meetings, the student becomes acquainted with the responsibilities which accompany the privileges received by physicians through licensure, society membership, and the granting of hospital privileges.

While participating in this clinical activity, the student observes the role the physician plays both as an entrance for patients into the health care system and as a leader and citizen in the community. This involvement in the clinical aspects of the clerkship provides a setting in which the student may better understand the concepts of community medicine and introduces the student to a broader look at the total health care needs and resources available in the community.

By visiting community officials and other key community leaders, the student learns of the complexities associated with the decision-making processes concerning health. The efforts of the community itself toward the identification and solution of problems related to the health of its people is noted. The practitioner becomes a valuable resource for this portion of the clerkship by directing the student to additional sources of information and sometimes by challenging opinions being formed by the student as a result of too limited exposure to selected community information sources.

As part of the community study, the student, in consultation with the faculty and field supervisors, chooses a topic for special emphasis and analysis. This community based research may be conducted in the physician's office, the hospital, some other health related agency or in the community at large. The study, while simple, provides the opportunity for the student to apply research methodology to the population of the practice or of the community. By presenting a final report to the community, the student increases the interest of community members in alternative solutions available to solve the problem addressed.

Communities used as clerkship sites to date are Centreville, Eutaw, Fayette, Hamilton and Red Bay. As the student load increases, additional sites will be developed. The preceptors are not reimbursed for this teaching. The communities, though not required to, usually provide lodging and meals for the students. Sometimes this assistance is provided by the local hospital and at others, it is provided by the local physician or group of physicians.

Research Methods

In addition to the reports on the community needs and resources which usually are county oriented, special studies have focused on such topics as swimmer's ear, gall bladder disease, infant mortality, analysis of a health services delivery program, patient compliance, immunization levels among school children, accidents, and the history of medical care in a county.

In all phases of the clerkship, the overall supervision is provided by a full-time faculty member from Tuscaloosa through weekly visits to the community. The clinical and day-to-day supervision is provided by the community practitioner.

The participation of these busy, active clinicians in medical education provides an important expertise as students prepare to assume their places along side older colleagues in the practice of medicine.

The cooperative efforts of practicing clinicians and academicians in the community medicine clerkships provide learning experiences not otherwise available from either source alone. ●

*Department of Community Medicine, College of Community Health Sciences, University of Alabama, Tuscaloosa, Alabama.

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References
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Hydrochloric Acid In Man And The Animals

T. Nagendran, M.D., B.S., F.R.C.S. (C), F.I.C.S.*

(The author's statement and conclusions are the results of his own studies and do not necessarily reflect the opinion of the Veterans Administration.)

All of the vertebrates have acid in the stomach.[1] The stomach has many secretory products. Among these, only the intrinsic factor of Castle is essential in man. The rest of them are less important, and they are water, electrolytes and pepsin.[2]

The human stomach secretion has about 170mM of chloride ion and 150 mM of hydrogen ion, sodium and potassium together 20 mM per liter. Recent experiments reveal that there must be a source of metabolic energy for the transport of these enormous amounts of hydrogen and chloride ions.[3] It is not known yet, at least in man, why the stomach has to go through this amount of trouble to produce all of these relatively unimportant secretory products.

The suggested functions of acid in man are: (a) bacterial sterility; (b) activation of pepsinogen; (c) absorption of trace elements; and (d) stimulation of secretin in the duodenum. In this paper, an attempt has been made to trace the different stages in the evolution of stomach and rationale behind hydrochloric acid production.

Of historical interest, it was William Beaumont who proved that the gastric juice has hydrochloric acid.[4] This happened in 1833, and the patient he studied was Mr. Alexis St. Martin. Alexis had a large gastric fistula, secondary to gunshot wound. Alexis learned to live with this fistula, and he actually outlived Dr. Beaumont.

Since then, comparative anatomy has confirmed that all vertebrates have acid in their stomachs. After Beaumont, Smith studied Alexis St. Martin. In 1875, the first surgical gastrostomy was done, and in 1876, Richet did another gastrostomy, and he confirmed Dr. Beaumont's earlier findings. The important contribution of Richet was that very rapid filling or emptying of stomach led to hiccups.

Twenty-five years after Richet, Pavlov established a gastric fistula in dogs and conducted his classic experiments. Ten years after Pavlov, Carson studied another patient with a gastric fistula. He, primarily, concentrated on hunger and contraction of the stomach.

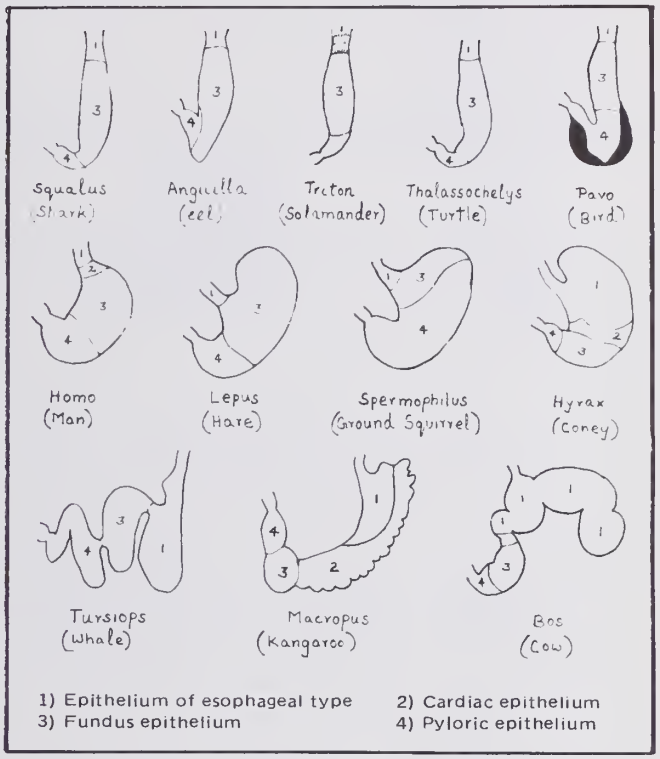


FIGURE 1. Stomach - comparative anatomy. 3) is fundic epithelium or grandular part and 4) is pyloric epithelium or muscular part.

In 1943, Wolf and Wolf studied another patient with a large gastic fistula.[5] Cade and Laterjet confirmed Pavlov's work in man.

Stomach As An Organ

Charles Darwin said[6]: "It is notorious that man is constructed on the same general type or model with other mammals. All the bones in his skeleton in his body can be compared with the corresponding bones in a monkey, bat or seal. So it is with his muscles, nerves, blood vessels and internal viscera. The brain, the most important of all the organs, follows the same law."

Snodgrass,[7] pointed out that the eating is the most important thing an animal (including man) does and that the alimentary canal is the most important organ it possesses. Every other organ,

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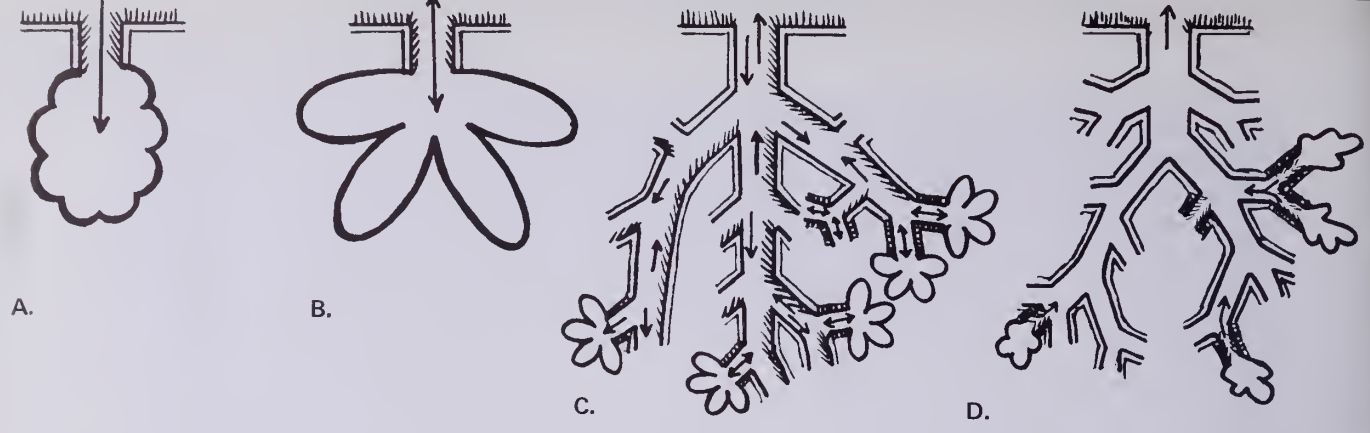


FIGURE 2. Digestive dicerticulum. a) the most simple form—food enters the flask-shaped chamber where it is digested and absorbed. d) the most advanced form—digestive juices are secreted in the stomach lumen.

including the musculoskeletal system, blood, lungs and heart are subservient to or dependent upon that which furnishes food to tissue cells. The musculoskeletal system helps man to work for food.

Blood is a servant of stomach (alimeimentary canal) to carry the nutrient. Respiration is accessory only to help the food burning to release energy. Sensory organs help to get the food, and the brain makes an unified organism out of what would otherwise be simply a complex mass of variously specialized cells; but it too must be fed.

The stomach is found in most, but not all, vertebrates. It is a muscular pouch-like expansion of foregut. The stomach has two parts: (1) proximal glandular, and (2) distal muscular. The stomach serves as a place for storage of food awaiting reception into the intestines for chemical treatment.[1] In food strainers such as Amphioxus and in ancient jawless ostracoderms, food particles were small and collected continuously. These could be passed on to the intestines without storage or pretreatment.

In contrast, the sharks' food intake is irregular, and food may be bolted in large chunks upon which the intestinal juices can not act effectively without proper preparation. So, in the course of evolution, the stomach functioned first as a food storage organ as in the jawed fish, then as a place for food pretreatment. The introduction of digestive enzymes was presumably a pylogenetic afterthought.

Evolution Of Parietal Cells

In vertebrates lower than mammals, there is only one type of glandular epithelium in the stomach which produces both hydrochloric acid and pepsinogen. In mammals, in contrast, there are two kinds of epithelium: (a) parietal cells; and, (b) the chief cells. It is presumed, in general, that the parietal cells are the site of origin of hydrochloric acid.

In primitive forms of life, the digestion is exclusively intracellular, e.g., protozoa.[8] During evolution, the intracellular digestion was replaced by extracellular digestion, like in man. The lower living forms, like mollusc, have digestive diverticula. These follicular glands communicate with the stomach by a system of ducts, lined by epithelial cells which discharge several functions—(a) elaboration of enzymes; (b) phygocytosis; (c) absorptions; (d) food storage; and, (e) excretion.

Diagram 2, A reveals a simple form of digestion. The food particles are pumped into a flask-like diverticulum where they are phagocytized by the lining cells and digested intracellularly and absorbed. In the more advanced forms, numerous tubules and an extensive series of ducts with increased epithelial surface are formed. In the most specialized situation, the epithelia are completely glandular as in man and the digestive juices are wafted into the stomach where the digestion is entirely extracellular.

The digestive tract: (a) receives food; (b) conducts and stores food; (c) digests and absorbs; and (d) forms feces. The reception involves devices for food maceration and mechanism for paralyzing the struggling prey and, in some instances, mechanisms to initiate the digestion. Many animals have special kinds of reception devices, e.g., anti-coagulants in blood-sucking leaches and insects. This is true for stomach also.

Some carnivorous gastropods secret a strong acid which dissolves the calcerous shells. The production of acid in this region and in the stomach of vertebrates may have arisen as an adaptation for killing prey and for checking bacterial activity. The production of an enzyme pepsin, which is active in an acid medium, might have followed later. A biological curiosity is that cells similar to parietal cells have been described in the salivary glands of blow fly larvae which secret isotonic Kcl.

Acid, A Vestige In Man

Patients with a chronic duodenal ulcer disease, after ulcer surgery, and patients with carcinoma of the stomach, after total gastrectomy, have learned to live normal lives having normal dietary habits. Since the modern man consumes well-cooked food, which is free of bacterial content, the glandular portion of the stomach function is far less important now than it was 500,000 years ago when fire was invented.

Acid And Stress

Wolf and Wolf pointed out that among the mental disturbances, the fear or sorrow (flight) always decreased acid production; on the other hand, the fight-back attitude increased the acid production.

The animals which have to fight to get struggling prey naturally will have increased acidity to digest the prey. The animals which run to escape will have decreased acidity. The exact mechanism of this phenomenon is not known.

Increase in catecholamine secondary to stress might increase gastrin from G cells of antrum (which are derived from neuroectoderm and part of APUD cell system) thus increase in acid.[9] Also, the animals which hibernate during winter are known to have decreased acidity during the winter. This might explain the reason why the duodenal ulcers heal during the winter and recur during spring.

Summary And Clinical Significance

The stomach has two parts, proximal glandular part and distal muscular part. In the course of evolution, the proximal part with its receptive relaxation came first. Then came the muscular part for chymification. The acid and enzyme part was phylogenitic after-thought. This information adds further support to the newer surgical procedure "parietal cell vagotomy" in the management of duodenal ulcer disease whereby the nerve supply to the glandular part of the stomach is divided and not the muscular part. ●

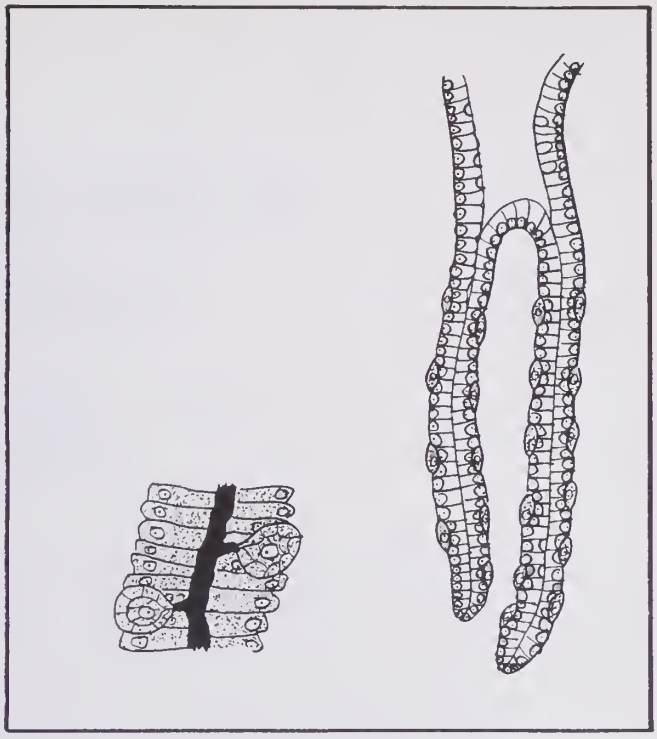


FIGURE 3. Chief and parietal cell morphology in man. Note the similarity between this and 2-D.

Acknowledgement:
I wish to thank Medical Media Production Service for photographs.

REFERENCES

1. The Vertebrate Body by Romer, W. B. Saunders, 1970. p. 335.
2. Functions of Stomach and Intestine by Friedman, University Park Press, 1973.
3. Functions of Stomach and Intestine by Friedman, University Park Press, 1973, p. 123.
4. Experiments and Observation on Physiology of Digestion by William Beaumont, Dover Publication, New York, N.Y.
5. Human Gastric Function by Wolf and Wolf, Oxford University Press.
6. What Darwin Really Said by Benjamin Farrington, Stockton Books Inc., 1966.
7. Anatomy and Physiology of Honey Bee by Snodgrass, McGraw Hill, 1926, p. 148.
8. General and Comparative Physiology by William Hoar, Prentice and Hall Incc, Biological Science Series.
9. Gastrin and Ulcer Disease, What Is Known, Ebeid, et al., Surgical Clinics of North America, December, 1976.

Modified N-G Sump Tube: The Superdrain

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To drain or not to drain has been a point of surgical controversy for many years. The goal of this article is not to persuade anyone to more frequent use of surgical drains, but rather to offer a reliable and efficient method of drainage when this option is chosen by the surgeon.

We have all experienced a multitude of problems when using drains, whether it be for drainage of large skin flaps, intra-abdominal abscesses, or less than optimal intestinal anastomoses. The Penrose drain frequently fails to remove sufficient volume of fluid, partially due to the fact that fluids drain poorly "uphill" even with capillary action. Suction-type catheters and conventional sump tubes frequently cease to function prematurely secondary to plugging of the tube's perforations. Also, many of the newer polyethylene tubes are rather stiff and thereby increase the patient's post-operative discomfort.

The drainage system which I use when good, reliable, efficient, and possibly long-standing drainage may be needed is a modification of the Salem® naso-gastric sump tube. To my knowledge, a similar drain is not commercially available.

The construction of the drain is quite simple. At the time of surgery, forceps and scissors are used to cut multiple small holes in a standard 3/4 inch Penrose drain (Fig. 1). The length of the Penrose is determined by the depth of the cavity to be drained.

The Penrose is then passed over the end of a No. 18 Fr. N-G sump tube and securely tied in place with No. 0 silk ligature as shown in Figure 2. The purpose of the Penrose drain is to protect the perforations of the N-G sump tube from being plugged with clots, adjacent structures, or any particulate matter. The ligature fixing the Penrose drain to the N-G tube is always placed outside the patient's skin surface to prevent the possibility of "losing" the Penrose in the patient at the time of removal of the drainage system.

The newly-constructed superdrain is then fixed to the skin with appropriate suture of the surgeon's choice. If he desires, the surgeon may connect the sump tube to the operating room wall suction while he finishes closing the wound.

After the surgical procedure is completed, a three-inch gauze sponge is taped over the air vent on the sump tube to act as a filter and help prevent any foreign material from being sucked into the wound.

Some of the uses of this superdrain include drainage of radical mastectomy skin flaps, subphrenic and other intra-abdominal abscesses, less than optimal suture lines in low anterior colon resections, and biliary, bowel, and pancreatic fistulas. Another very fine utilization of the drain is in abdomino-perineal resection of the colon and rectum. The drain can be placed in the sacral hollow and the remaining muscles of the pelvic floor approximated around the drain, as is the skin (Fig. 3).

Post-operatively, the drain is connected to low-pressure continuous wall suction. The negative pressure is set low enough to barely keep the system functioning. This can conveniently be checked by holding the filtered air vent near the surgeon's or nurse's ear. A distinct whistle or cracking sound will always be heard when the drain is functioning properly.

In a patient with pancreatic abscess and fistula, I have personally used this drain successfully for five weeks of continuous drainage, except for periods of patient ambulation. In two years of frequent and varied uses of this drainage system, a failure due to malfunction of the drain has not been experienced.

In addition to the above-mentioned features, the N-G tube is smaller in diameter, longer, and more pliable than many other types of sump tubes.

In summary, the superdrain is simple, very reliable and efficient, and has many varied applications. ●

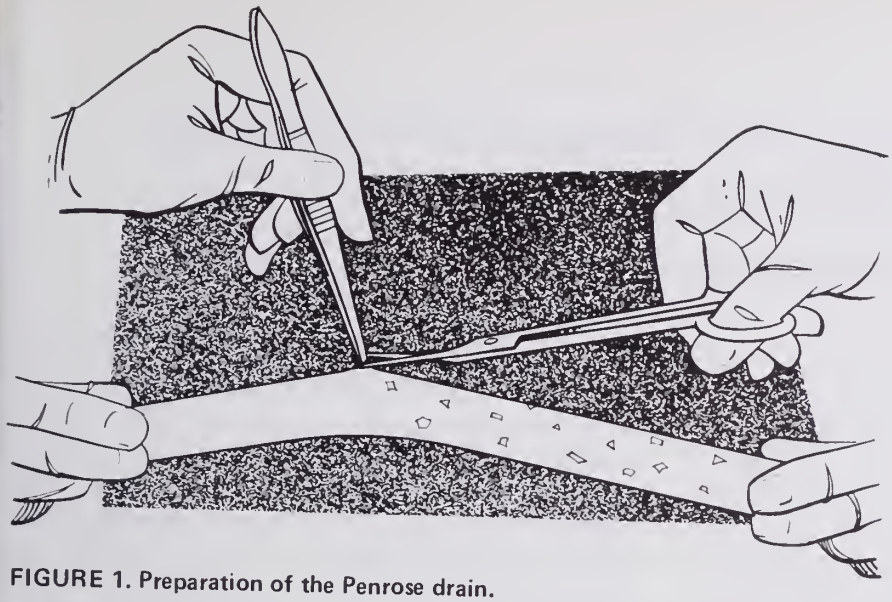


FIGURE 1. Preparation of the Penrose drain.

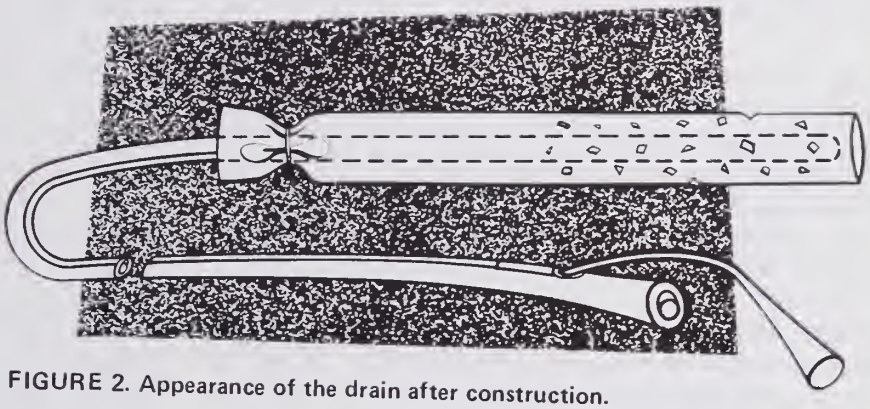


FIGURE 2. Appearance of the drain after construction.

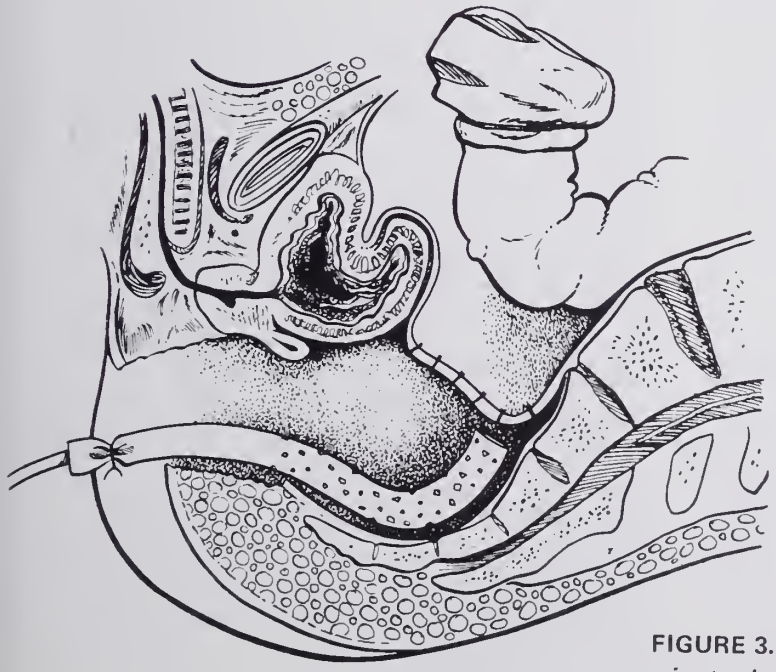


FIGURE 3. Position of the drain for abdomino-perineal resection, prior to closure of dead space.

Acute Leukemia After Melphalan Treatment For Ovarian Carcinoma

John C. Blythe, M.D.

Abstract

Acute leukemia occurred in a woman after an apparent cure of ovarian carcinoma with melphalan. There have been several reports of acute leukemia complicating melphalan treatment of multiple myeloma. This represents one of more than a dozen patients reported having developed acute leukemia after alkylating agent treatment of ovarian carcinoma. Prolonged treatment, high total doses, and severe marrow injury appear to be contributing factors.

Introduction

Carcinoma of the ovary is one of the most responsive cancers to chemotherapeutic agents. For 20 years the most effective drugs have been the alkylating agents. These radiomimetic drugs share with irradiation the potential danger of bone marrow suppression in the immediate post treatment period.

With prolonged use they have as an additional hazard the possibility of developing a second cancer, namely acute leukemia. A major problem in this regard is knowing when to discontinue treatment in patients who appear to be free of disease.

The following case is reported to bring attention to a patient who developed acute leukemia after an apparent cure of ovarian cancer with melphalan. This case emphasizes the possible danger of long term alkylating agent chemotherapy. Such emphasis seems especially appropriate in light of the present interest in adjuvant chemotherapy for breast and other cancers.

Case Report

R. C. was 45 years old when, in December 1967, she had a hysterectomy and bilateral salpingo-oophorectomy for abnormal uterine bleeding. At operation the left ovary was found to be slightly enlarged and adherent to the left pelvic wall. The pathological report indicated a grade 0-1 adenocarcinoma of the left ovary and a grade 0-1 insitú carcinoma of the endometrium. Between Jan. 15 and Feb. 23, 1968, she received 5600 rads of telecobalt therapy to the pelvis.

She did well until May 1973 when a mass was detected on rectal examination. At operation she was found to have metastatic carcinoma to omentum. Biopsy showed a well-differentiated papillary adenocarcinoma, apparently of ovarian origin.

Chemotherapy with melphalan (Alkeran) was initiated in May, 1973. It was given for three days every 4-5 weeks in a dose ranging from 0.5 to 1.0 mg/kg/day, depending on bone marrow tolerance. Except for a three-month interruption in the summer of 1975, chemotherapy was continued until July 1976. Persistant mild anemia and leukopenia necessitated the rest period, and the dosage tolerance appeared to be less thereafter. She received a total of 1392 mg. (23.2 mg/kg) or melphalan.

At the termination of chemotherapy in July, 1976, she had no evidence of recurrent cancer. A "second look" operation was refused by the patient, and she continued to do well until November 1976 when she began to complain of increasing fatigue and dyspnea on exertion.

She was admitted to the hospital on Nov. 8, 1976, because of high fever (40 degrees C) and dyspnea. She was markedly anemic (Hct. 11, Hgb. 4.5), leukopenic (WBC 1500) and thrombocytopenic (platelets less than 10,000). A bone marrow aspirate showed bizzare erythroid precursors and many undifferentiated blasts. Seven days later and after treatment with folic acid and B_{12}, a repeat marrow showed fewer abnormal erythroid cells and 70% blasts. At her family's request she was not given chemotherapy but was treated with antibiotics and blood transfusions.

Similar admissions took place in December and January. Her final admission on Feb. 27, 1977, was necessitated by septasemia and anemia. A repeat bone marrow examination revealed almost complete replacement with undifferentiated blasts.

During this admission, permission was granted to initiate aggressive chemotherapy. On March 10 she received 100 mg. daunorubricin and 2 mg. vincristine. For five days beginning on March 11, she received 130 mg cytarabine. On March 14 and 15 she received 120 mg. of 6-thioguanine. And each day between March 10 and 15 she received 100 mg. of prednisone. There was no clinical response, when the patient died on March 30, 1977.

An autopsy revealed no evidence of residual carcinoma. The bone marrow was hypoplastic,

apparently as a consequence of leukemia chemotherapy.

Discussion

Ovarian cancer is a major health problem in the United States, causing 11,000 deaths annually. The gravity of this disease can be appreciated when it is realized that more women die of it each year than of cervical cancer and cancer of the corpus uteri combined. One reason for the high death rate is the difficulty in making an early diagnosis. Unfortunately, this is not likely to improve because of the late onset of symptoms and because barely palpable cancers frequently have intraperitoneal dissemination.[1]

Over 90% of ovarian cancers are of epithelial origin. These include the common ovarian carcinomas—serous, mucinous, and undifferentiated. Despite the fact that about half of these carcinomas, even when advanced, will respond to chemotherapy, the five-year survival rate has not improved appreciably over the last 20 years.

Until better agents or better combination regimens are found, the standard therapy for ovarian carcinoma will remain the alkylating agents. Smith[2] reviewed the experience at the University of Texas M.D. Anderson Hospital and Tumor Institute, and reported a 47% response rate in 494 patients treated with melphalan. This single alkylating agent proved more effective than the combination regimen of actinomycin D, cyclophosphamide, and 5-fluorouracil, and more effective than chemotherapy plus irradiation. Only melphalan followed by a reoperation proved superior.

There is overwhelming evidence that alkylating agents may cause leukemia.[3,4,5,6,7,8] These agents are effective against some tumors because they cross-link DNA during the resting phase of cell division, producing a radiomimetic effect. The acute myelocytic, or myelomonocytic leukemia or erythroleukemia (i.e. the "non-lymphocytic" acute leukemias) that develops is the same sore that occurs after radiation exposure. Prolonged marrow aplasia and slow recovery have been common in patients developing leukemia.[3]

Malphalan was one of the first alkylating agents to be associated with the development of acute leukemia.[9] Reporting on 476 multiple myeloma patients treated with mephalan, Gonzalez[10] identified six who developed acute leukemia and five who developed sideroblastic anemia, a condition predisposing to leukemia. All of the patients received prolonged chemotherapy, the median duration being three years. Major chromosomal changes were found in all the patients studied.

Reports of acute leukemia occurring in patients treated with alkylating agents are becoming more frequent. Sortel et al[11] reported on two patients treated with chlorambucil. One had been treated for 86 months and the other for 69 months.

Khandekar et al[12] reported two additional patients who received prolonged treatment with chlorambucil for ovarian carcinoma. Each received large total doses and one also received 4000 rads of telecobalt therapy to the pelvis.

Reimer et al[13] reported on data from 51 centers which included 4324 patients who had alkylating agent chemotherapy for ovarian cancer. They were able to identify 12 patients treated for two years or longer who subsequently developed acute leukemia. Statistically this represents a relative increase in the risk of developing acute leukemia by 171 fold.

Of 13,309 women with ovarian carcinoma registered with the End Result Program of the National Cancer Institute between 1935 and 1972 there were only two cases of acute leukemia. Thus, it appears that there is no increased risk of acute leukemia in patients with ovarian carcinoma unless treated with alkylating agents.

While there is no question that the probable benefit of alkylating agent chemotherapy for ovarian carcinoma outweighs the possibility of developing leukemia, it is important that this complication be recognized and reported. There should be careful surveillance of all patients treated with alkylating agents and with expected long term survival.

Additionally, it is important to determine as soon as possible when chemotherapy can reasonably be discontinued in patients who become free of obvious cancer. As in the case of Hodgkins disease, the necessary number of courses needs to be known. This will require large case studies and possibly a renewed interest in "second look" operations. ●

Nonproprietary Names and Trademarks of Drugs

Actinomycin D — *Cosmegen*
Chlorambucil — *Leukeran*
Cyclopospham ide — *Cytoxan*
Cytarabine — *Cytosar*
Daunorubricin — *Adriamycin*
5 - Fluorouracil—*Fluorouracil*
Melphalan — *Alkeran*
6 - Thioguanine — *Thioguanine*
Vincristine — *Oncovin*

REFERENCES

1. Tobias JS, Griffiths CT: Management of ovarian carcinoma: current concepts and future prospects. N Eng J Med 294: 818-823, 1976.

CONTINUED ON PAGE 57

The "Ideal" Daily Total Protein Intake

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F. H. Medford, B.S.‡

Introduction

The adult RDA (Recommended Dietary Allowance) for total protein has been set at 56 and 46 gms. per day for the male and female respectively.[1] The Food and Nutrition Board grants the RDA is designed to protect only against classical protein deficiency states. There is no claim that this dosage is intended as the "ideal" daily intake for the maintenance of optimal health.

A series of studies[2-11] has attempted to develop a truly "ideal" daily consumption based on the hypothesis that relatively symptomless and signfree persons are healthier than those with clinical symptoms and signs. Therefore, the intake of such groups might well provide a basis for designating the "ideal" daily total protein consumption.

Method of Investigation

One thousand forty dentists and their wives were evaluated in terms of daily reported total protein consumption as judged from a food frequency questionnaire. Clinical state was graded by the Cornell Medical Index Health Questionnaire (CMI). The CMI is a self-administered health questionnaire consisting of 195 questions. Each question is answered by circling the word "yes" or "no". The questions are phrased so that the affirmative answers indicate pathology. The clinical findings in this report are the total number of affirmative CMI responses (CMI score).

Results

Table 1 shows (line 1) the daily total protein consumption of the entire group of doctors and their wives. In this sample of 1,040, the CMI ranged from 0 to 125 with a mean and one standard deviation of 15.9±12.4. The daily reported total protein intake ranged from 25 to 257 gms. with a mean and standard deviation of 103±36 per diem.

This is approximately two-fold more than the RDA. Parenthetic mention must be made that both the American Medical Association[12] and the American Dental Association[13] have indicated that the type of doctor interested in his own health is already above average in health. Hence, in the usual context, these values in line 1 of Table 1 would be viewed as "ideal" when in fact, they are only normal (average).

Deleting all subjects with 50+ symptoms and signs leaves a sample size of 1018 (line 2), a mean and standard deviation for the CMI of 14.8±9.9, a total protein range of 25 to 257 gms. and a mean and standard deviation of 103±36. Exclusion of all subjects with 40+ symptoms and signs (line 3) nets a sample whose daily total protein consumption is 103±36. Proceeding through the eleven lines of this table, the daily total protein intake slowly rises as the number of allowable clinical symptoms and signs (CMI score) is reduced.

The significance of the progressive increase in the mean total protein intake by groups with progressively fewer symptoms and signs of disease is tabulated in Table 2. Compared with the entire sample, there is a statistically significant increase in mean protein intake in the subjects with less than ten, five, four, three, and zero CMI findings.

This approach indicates that the healthier the sample, the greater the daily total protein intake. Under the conditions of this experiment, approximately 125 gms. of total protein may be designated as the "ideal" daily allowance. This is approximately two and one-half times the RDA.

It is recognized that the "ideal" is nonexistent as a theoretic endpoint since there is biochemical individuality and because the state of the measurement art leaves much to be desired. Nonetheless, the technique utilized here provides a goal not previously considered.

Summary

To determine the optimal total protein intake, 1040 dentists and their wives were evaluated in terms of their clinical symptomatology and total protein consumption.

In a progressive selection of healthier subgroups (those with fewer and fewer symptoms and signs), the total protein intake increased to over twice the RDA. ●

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‡Research Assistant, Department of Oral Medicine, University of Alabama in Birmingham.

References

1. Food and Nutrition Board, United States National Research Council-National Academy of Sciences. Recommended dietary allowances. 1974. Washington, D. C., National Academy of Sciences.
2. Cheraskin, E., Ringsdorf, W. M., Jr., and Medford, F. H. The "ideal" daily lysine intake. IRCS Med. Sci. 5: 390, 1977.
3. Cheraskin, E., Ringsdorf, W. M., Jr., and Medford, F. H. The "ideal" daily vitamin C intake. J. Med. Assn. St. Alabama 46: No. 12, 39-40, June 1977.
4. Cheraskin, E., Ringsdorf, W. M., Jr., Medford, F. H., and Hicks, B. S. The "ideal" unrefined carbohydrate intake. J. Am. Soc. Prevent. Dent. 7: No. 1, 6-7, January-February 1977.
5. Cheraskin, E., Ringsdorf, W. M., Jr., and Medford, F. H. The "ideal" daily nicacin intake. Int. J. Vit. Nutr. Res. 46: No. 1, 58-60, 1976.
6. Cheraskin, E., Ringsdord, W. M., Jr., and Medford, F. H. The "ideal" daily vitamin A intake. Int. J. Vit. Nutr. Res. 46: No. 1, 11-13, 1976.
7. Cheraskin, E. and Ringsdorf, W. M., Jr. How much refined carbohydrate should we eat? Amer. Lab. 6: No. 7, 31-35, July 1974.
8. Cheraskin, E., Ringsdorf, W. M., Jr., and Medford, F. H. The "ideal" daily vitamin B_1 consumption. J. Oral Med. (in press)
9. Cheraskin, E., Ringsdorf, W. M., Jr., and Medford, F. H. The "ideal" daily threonine intake. (pending publication)
10. Cheraskin, E. The name of the game is the name. Proc. San Diego Biomed. Sympos. 1974, 13: 31-39, 6-8 February 1974.
11. Cheraskin, E. The name of the game is the name. In Williams, R. J. and Kalita, D. K. A physician's handbook on orthomolecular medicine. 1977. New York, Pergamon Press. pp. 40-44.
12. Editorial. You may be sicker than you think. J.A.M.A. 181: No. 2, 27, 22 September 1962.
13. ADA health screening program for dentists. J.A.D.A. 79: No. 2, 235, August 1969.

Table 2

statistical significance of the relationship of total protein and reported clinical findings (CMI)

	n	t	P
1) entire sample	1040		
2) CMI <10	369	2.453	<0.025*
3) CMI < 5	108	2.370	<0.050*
4) CMI < 4	71	2.045	<0.050*
5) CMI < 3	42	2.019	<0.050*
6) CMI < 2	14	1.317	>0.100
7) CMI 0	6	2.219	<0.050*

*statistically significant difference of the means

November 1976°

Table 1

relationship of reported daily total protein intake (food frequency questionnaire) and reported total clinical findings (Cornell Medical Index Health Questionnaire) in a presumably healthy male and female sample

	sample size	clinical findings (affirmative CMI responses) range	clinical findings (affirmative CMI responses) mean & S.D.	daily intake of total protein (grams) range	daily intake of total protein (grams) mean & S.D.
1) entire sample	1040	0-125	15.9±12.4	25-257	103±36
2) CMI <50	1018	0- 49	14.8± 9.9	25-257	103±36
3) CMI <40	989	0- 39	14.0± 8.7	25-257	103±36
4) CMI <30	915	0- 29	12.4± 7.0	25-257	102±36
5) CMI <20	748	0- 19	9.9± 4.9	25-257	104±36
6) CMI <10	369	0- 9	5.7± 2.3	38-240	108±38
7) CMI < 5	108	0- 4	2.8± 1.2	41-240	111±36
8) CMI < 4	71	0- 3	2.1± 0.9	57-196	111±32
9) CMI < 3	42	0- 2	1.5± 0.7	70-196	113±30
10) CMI < 2	14	0- 1	0.6± 0.5	70-163	112±24
11) CMI 0	6	0	0.0± 0.0	100-163	125±24

November 1976°

Decubitus Ulcer Management: A Simple Program

Lloyd P. Fowler, E.T.*
and
Betty Price, M.D.†

The decubitus ulcer presents a stubborn, difficult problem for patient and physician. The variety of treatments suggests that the single best modality of care may not yet have been devised.

This article presents a simple approach to management, which has yielded encouraging results for many patients.

The procedures are offered here to help those who deal with this discouraging challenge.

It is far better to avoid decubitus ulcers than to try to heal them after they occur.

Before dealing with a specific regimen for the patient with pressure sores, we feel it is useful first to state some basic principles which underlie the therapeutic endeavor:

1. The kind of ulcer determines the care plan employed.
2. Pressure on the area must be removed.
3. Vascularization must precede healing.
4. Treatment must be persistent, vigorous and thorough.
5. The patient must receive adequate, high protein nutrition if the site is to heal.

Staging

The management plan for the patient with decubiti must be predicated upon careful evaluation of the problem, with staging:

An early pressure sore has reddened but intact skin.

The next stage is the ulcer which has a broken skin surface but no infection.

A third-stage ulcer is a deeper lesion, which may be infected with purulent drainage and may be roofed by a dark crust (which impedes healing).

The worst kind of decubitus ulcer is an infected one which extends deeply into the fascia, muscle, and often into the bone, and usually has multiple sinus tracts.

In evaluating the situation, the physician must note the stage, size, and whether sinus tracts exist, but also the patient's state of consciousness, capacity for cooperation, and degree of bodily mobility.

Management

The management plan must include a therapeutic approach with definition as to who shall be providing the care needed. The success of any program is related significantly to the thoroughness with which care is provided.

An important aspect of decubitus care is caring. The patient benefits from knowing that the therapist cares. The therapist must carefully nurture hope yet prepare the patient for the slow course characteristic of this problem. Stress may be placed upon the need for patient cooperation in the endeavor to heal the ulcer.

A single, caring nurse cannot provide all the care needed by a patient with this problem. Where possible, it is desirable to involve the family.

To treat these ulcers successfully, it is essential that control measures are instituted to deal with incontinence so that soilage does not occur.

A high-protein, high-vitamin diet is essential to counteract the catabolic activity and the drainage associated with pressure ulcers. Healing is impeded by an inadequate hemoglobin.

To the degree which is feasible, the patient needs to be encouraged to be active. Movement will help the general circulation, aid body tone, and favor a better appetite.

Specific Measures

A very early decubitus ulcer may be successfully treated with massage and application of Proderm foam to reinforce the surface tissues.

The moderately severe ulcer may heal with use of a modified Karaya procedure.* The steps we have found effective are as follows:

1. Clean the ulcer with Phisohex and rinse well with saline.
2. Apply peroxide (3% strength).
3. While the wound is still bubbling from the peroxide, dust liberally with sterile Karaya powder.
4. Spray the entire surrounding skin with Skin Prep. Allow this to dry completely.
5. Custom cut a Restan foam pad to conform to size and shape of the ulcerated area plus ¼-½", so that the protective foam ring will lie on the intact skin around the ulcer, protecting it from further pressure and damage. Press this protective pad down over the ulcer and seal it on good skin.
6. Use Saran wrap to cover both the ulcer and the protective Restan foam pad, using the minimum amount of 1 in. paper tape needed to secure the Saran wrap.

The first three steps listed here should be repeated faithfully every eight hours.

The foam donut may be left in situ several days as long as it is clean. (Note that removal of the pad is hard on the skin and may contribute to frequent breakdown.)

In dealing with a deep, infected decubitus ulcer, the following protocol may prove helpful:

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*Wallace, Gladys and Hayter, Jean: "Karaya for Chronic Skin Ulcers," American Journal of Nursing, II, June 1974 p 1094.

1. Necrotic tissue should be surgically debrided.
2. Irrigate the ulcer thoroughly with 3% hydrogen peroxide, using a No. 14 Robinson catheter and a catheter tip syringe. It is exceedingly important that all sinus tracts are penetrated with the catheter. Rinse with normal saline, using the same process.
3. Pour Betadine on all the exposed ulcerated areas and the adjacent intact skin. If it seems more appropriate, apply with 4x4 gauze squares.
4. Working with tweezers, pack the ulcerated area and sinuses with iodoform gauze.
5. Spray Skin Prep on all the skin adjacent to the wound and let it dry completely. This will protect the skin, which is particularly important if there is drainage from the ulcer.
6. Cover the ulcer with 4x4 gauze squares and an abdominal pad if needed.
7. Use 1 in. hypoallergenic paper tape to secure the dressing, with care that the tape does not touch any skin which is not protected with Skin Prep. It is desirable to use as little tape as possible.

This procedure should be performed three times a day. The healing process may be stimulated by a whirlpool bath twice a day.

In conclusion, we offer procedures to promote the healing of pressure ulcers. Aggressive care is needed, since these ulcers may become worse with astonishing rapidity. Where healing does not seem to be possible, this regimen can promote patient comfort, control noxious odors and stabilize the ulcers to prevent further deterioration.

This program provides a feasible management plan which can be used in hospitals, nursing homes, or at home with a minimum of training and materials. ●

AMA Has New Committee on Services to Young Physicians

The AMA now has an Ad Hoc Committee on Services to Young Physicians. Objectives of the 11-member group are to determine the needs of young practicing physicians in order to recommend the modification of existing AMA activities and creation of new services.

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It takes a multitude of things to build and maintain a doctor's practice. But, foremost is the critical element of trust. Trust cannot be bought, it can only be earned.

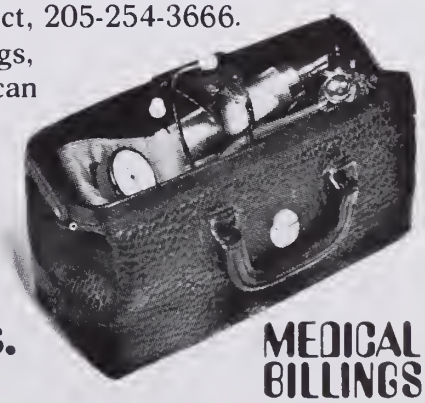
Another valuable part of the operation of a doctor's practice is a competent, professional billing service. And again, that critical element of trust comes into play. For, if a billing service is worth its salt, it is above all, trustworthy.

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LIFE SUPPORT COMMUNICATIONS FOR WEST ALABAMA



Graphic reproduction: Michael H. Payne

By PHILLIP K. BOBO, M.D.,* NED BUTLER†

This hypothetical happy-ending story is one which is already being frequently duplicated in real life in several areas within Alabama's most highly developed regional emergency health care delivery system, the West Alabama Emergency Medical Services, Inc. region, composed of Bibb, Fayette, Greene, Hale, Lamar, Pickens and Tuscaloosa counties.

West Alabama EMS is one of 40 regional advanced life support systems currently funded by the Department of Health, Education and Welfare.

West Alabama EMS also receives supplemental funding from the Appalachian Regional Commission for basic life support activities.

10:15 a.m. July 4, 1978 — A grinding crash on highway 61 eight miles south of Greensboro disrupts the peaceful countryside.

10:16 a.m. — a nearby resident calls Hale County 911. "We've got a terrible accident, a car has hit a power pole, a man is badly injured and pinned in the car."

"Communications center to sheriff, 10-50 reported on highway 61 near Newbern, man injured. Advanced life support unit, extrication squad and power company are en route."

10:23 a.m. — "Hale County Ambulance to communications center, we're on the scene, power company and rescue squad are right behind us."

10:24 a.m. — (beep-beep-beep) "This is Druid City Hospital Regional Medical Control, Dr. Smith speaking."

"Dr. Smith, this is Hale County Ambulance, we have a male auto accident victim approximately 25 years old involved in a collision with a power pole. Victim is pinned in vehicle, standby for vitals..."

"Druid City, vitals are as follows: blood pressure 60 by palpation; pulse 80 and weak; respirations are 10, shallow and weak; pupils are equal and reactive with no signs of head injury; possible neck injury, suspect flail chest with accompanying pneumothorax; victim is unconscious."

"Druid City to Hale County Ambulance, how soon will the victim be removed from the vehicle?"

"It will be a few minutes Dr. Smith, they're working on it now but he's pinned pretty tight."

"Druid City to Hale County Ambulance, stabilize the neck, maintain an airway, start an IV with Ringer's and monitor the blood pressure. Let's get Hale County Hospital on the line on this one."

10:26 a.m. — (beep - beep - beep) "This is Hale County Emergency Room, Miss Jones speaking."

"This is Hale County Ambulance, we have Druid City on the line and have received treatment orders on an accident victim. We will transport to Hale County Hospital. Is the doctor on call in the hospital?"

"The doctor is at home presently, I'll notify him to report to the hospital."

"Druid City Hospital, this is Hale County Ambulance, the victim has been removed from the vehicle. He is also suffering from an apparent fractured femur. We have applied a Hare Traction Splint and instituted protocols for flail chest. IV is in place and blood pressure is now 80 by palpation."

"This is Druid City Hospital, go ahead and transport to Hale County Hospital."

10:38 a.m. — "Hale County ambulance to communications center, we are arriving at Hale County Hospital."

11:02 a.m. — "Hale County Ambulance to Druid City Hospital, we are transferring accident victim to Druid City for admission upon direction of Hale County physician. Victim is now stable, IV is being continued during transfer. Our estimated time of arrival at Druid City is 30 minutes."

July 10, 1978 — After critical care in regional hospital ICU, patient is transferred to Hale County Hospital in his hometown for additional care prior to release July 19, 1978.

July 27, 1978 — West Alabama Emergency Medical Services, Inc. tracks patient through dispatch forms, ambulance reports and hospital records, gathers statistical data to determine compliance with established EMS procedures and records another save.

---

*Project Director West Alabama EMS, Inc.

+Director, Office of Telecommunications, State of Alabama.

‡ Director, Division of Emergency Medical Services, Alabama Department of Public Health.

ARTHUR F. HARMAN ‡

How It All Began

In 1974, a feasibility study was conducted under the auspices of the regional health planning council. In July, 1975, development of a basic life support system began with a federal grant in the amount of $157,986.

A second-year implementation grant for basic life support followed in the amount of $150,845. West Alabama Emergency Medical Services, Inc. (EMS) began, on a county-by-county basis, to pull together the necessary ingredients for a fully coordinated emergency medical services system.

Standardized county-wide emergency access phone numbers were initiated and publicized, medical treatment protocols were established, record-keeping forms were developed and other vital elements such as training were addressed.

Through these efforts to develop a truly coordinated system, emergency care became more than just a fast ride to the nearest hospital.

In July, 1977, the region moved into the advanced life support phase of health care development continuing its wall-to-wall basic life support system while concentrating on improvements aimed at a complete advanced life support system.

How It Works

Advanced life support depends largely on the establishment of a viable medical control concept embodying five necessary elements:

1. medical treatment protocols
2. patient triage
3. on-line physician direction
4. communications technology
5. medical accountability

Crucial to the implementation of a system of medical control for advanced life support is a communications system sufficient to satisfy the need for continuous and uninterrupted voice and telemetry communication between physician and emergency personnel in the field.

West Alabama EMS has worked closely with representatives of the Governor's Office of Telecommunications, the state division of Emergency Medical Services in the Department of Public Health and others to design a system to meet these unique requirements.

West Alabama's innovative approach to the provision of communication technology/hardware for advanced life support activities involves strategically placed ultra high frequency (UHF) radio/telephone interface bases, touchtone access features, and the employment of pre-programmed microprocessor devices to preclude the necessity of manned channel coordination and assignment centers.

Five Elements

The five essential elements of viable medical control which were noted above are squarely addressed through the implementation of this newly conceptualized system.

The original medical control center facility, Druid City Hospital, will be directly linked to the outlying rural associated hospitals in the six surrounding counties to provide 24-hour a day physician control and medical accountability for all EMT, intermediate MET and paramedic activities conducted anywhere within the seven-county area.

With this system of radio/telephone switch stations (RTSS), medical control is assured.

One UHF radio base station will be strategically placed in each rural county equipped with telephone interface capability as well as microprocessors to determine the appropriate channel allocation and to prevent co-channel interference which might otherwise occur.

The radio/telephone switch stations employ a four-frequency transmit/receive base station, as required by the FCC rules and regulations regarding EMS-UHF stations. Four medical channels will be provided at each RTSS location.

Although this system uses telephones, no dedicated lines are required for system operation. Employed are two standard private line telephones coupled to the RTSS by use of a telephone coupler.

This enables the medical personnel in the field to "dial up" the local hospital and the regional medical control hospital.

These stations will provide virtually complete county-wide access by advanced life support ambulance and fire-medic units who will use touchtone (telephone type) access devices to rapidly link them by UHF radio to one of the base stations (See Figure 1). The paramedic activates the base station using only three touchtone digits.

The microprocessor will then verify the availability of a working medical channel and, through the telephone interface, route the incoming radio call from the field paramedic to the original medical control center using standard telephone lines and dedicated telephone terminal equipment, accoustical coupler and medical consoles to accomodate the receipt, demodulation and presentation of voice/ECG and other biomedical information.

The system will have multiplex-duplex capabilities, i.e., voice and ECG data can be simultaneously transmitted from the field and both the physician and paramedical personnel will have interrupt capabilities.

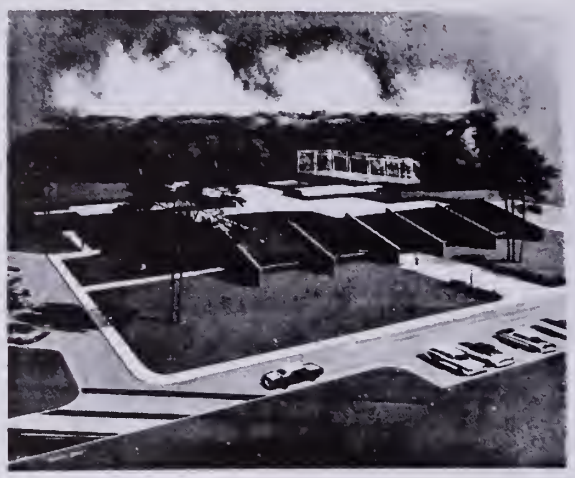
The paramedic will also have the capability of simultaneously connecting any third party, or facility, equipped with a standard telephone merely by touchtone dialing them from the field location.

For example, a paramedic handling a poison victim can use his touchtone equipped standard field UHF radio to reach the nearest base station by touchtoning three digits. Thereafter, he can touchtone three more digits to reach Druid City Medical Control; upon the advice of Medical Control, the paramedic can put Druid City temporarily on "hold" and call the Poison Control Center in Denver, Colorado.

Then, by taking Druid City off "hold", the paramedic in the field, the physician in regional medical control and the physician in the Poison Control Center in Denver can all simultaneously hear and talk to one another on a three-way hookup.

The long distance toll can be identified so that it can be billed to the patient or otherwise handled. In another situation, such as involving particularly complicated trauma, ECG/voice transmission can be simultaneously transmitted to the regional medical control in Druid City and to other distant facilities, such as University Hospital in Birmingham.

CONTINUED ON PAGE 61



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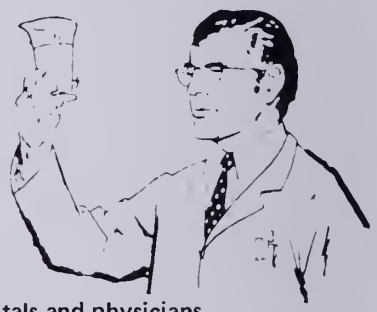
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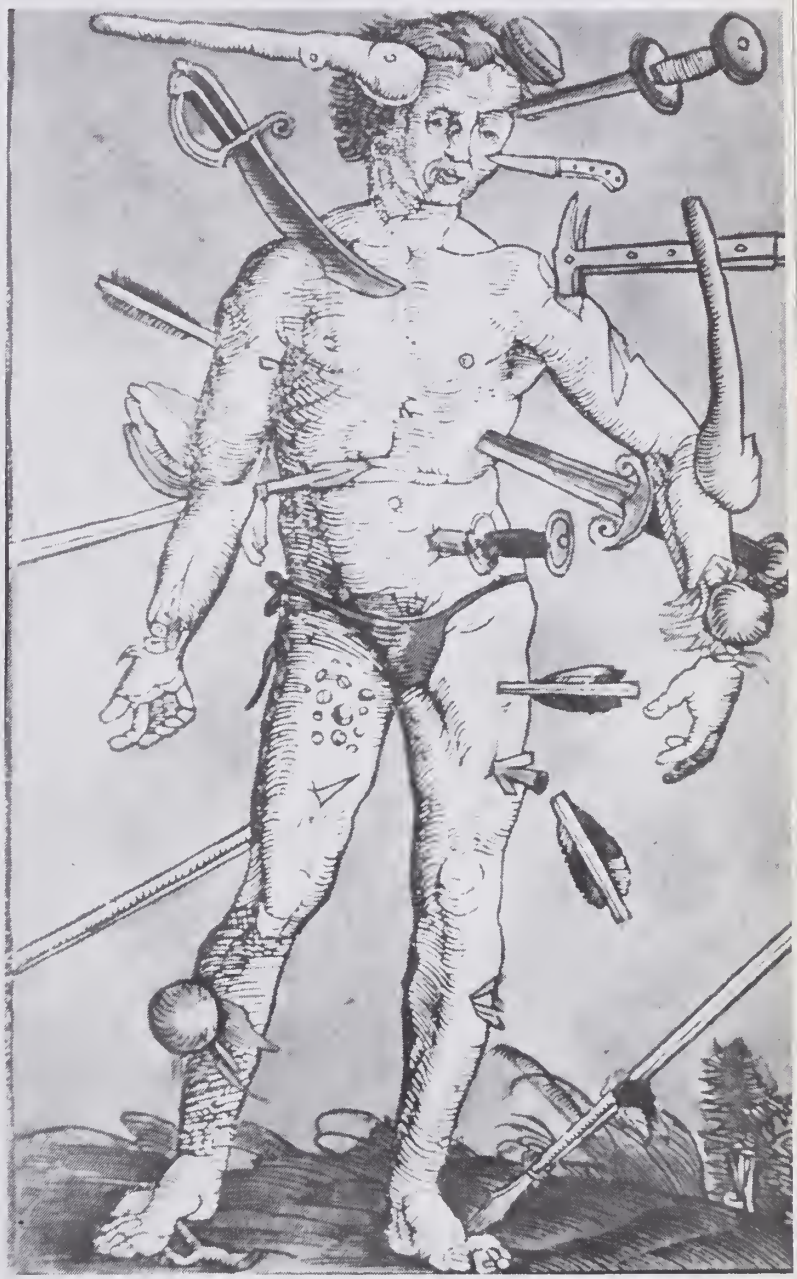
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Reynolds Historical Library







Above, battle wounds of the 15th Century, from a medical text of the times in the Reynolds Library. At left, a device used in the same era for depressed head wounds.

Dr. Curtiss's Little Critters

CONTINUED FROM PAGE 26



Very often in this country, when a new antibiotic is introduced, anywhere from three to six years later, it is not as successful because resistance to it has been increasing.

The Process of Restriction

"So there has been a lot of work on the mechanisms of plasmid-mediated drug resistance because it's been a large problem and of great importance in contending with bacterial infectious diseases.

"Another sort of phenomenon that was discovered, at least in a biological sense, in the early 50s was — and we now understand a little more about it — a process called restriction.

"Higher organisms, like ourselves, recognize foreign proteins when introduced in the body and we elicit an immune response. And yet, except in rare cases where we have auto-immunity, we tolerate our own proteins.

"In other words, we have a mechanism for recognizing self from non-self, which is at the level of proteins. It turns out that bacteria have a mechanism for recognizing DNA as being their own, or from some other bacterium or virus. And, indeed, this mechanism of restriction, which is the recognition of DNA as foreign, acts as a defense mechanism to prevent bacteria from being infected with bacterial viruses. It is sort of a mechanism of viral resistance.

"It's also a mechanism of preventing plasmids from being transferred from one microorganism to another. And this restriction is manifest against foreign DNA by microorganisms, and is due to an enzyme, which is a protein, that recognizes the foreign DNA as foreign and then *cuts* it — just like with a pair of scissors.

"When one breaks DNA, then it's subject to degradation by other enzymes that are present in the bacterial cell.

"Now it turns out that these enzymes, which we call restriction enzymes, have a habit of breaking up DNA in a rather precise way, and it was this discovery, in the early 1970s, that these enzymes could home in on very specific regions of DNA that were unique for that enzyme, which gave people in microbial molecular quarters the idea that they could use the restriction enzymes, whether they come from strains of *E. coli* — or *Bacillus,* or *Hemophilus influenzae* — as specific sorts of scissors to cut up and dissect a DNA molecule.

"At the same time, it was shown that these enzymes could sometimes cleave these plasmid DNA molecules in specific ways. And between the coupling of these observations and the availability of enzymes, which act on DNA, it was possible to conceive of taking DNA from any old organism, cutting it up with a given restriction enzyme, and then combining those fragments with a plasmid DNA molecule that had similarly been cut open, so that it was linear, to make what we call *recombinant* DNA molecules, where you inserted a stretch of DNA from some organism — human, viral, fruit flies, whatever — or another bacterium — and then, after forming these recombinant molecules, putting them into good old *E. coli* K-12 by a process called transformation, where that recombinant molecule would be duplicated every time the bacterial cell divided and where one could then study the function, structure, et cetera, of that inserted piece of foreign DNA.

"Now, I should say that these restriction enzymes have a habit of cutting DNA so that the ends—they have sort of sticky ends, as we call them in the field—that recognize sticky ends as generated in other DNAs by the same enzymes, so they form up like an antibody interaction, that just allows them to stick together and it is based on the molecular structure of DNA, which allows this to occur.

Five Years Ago

"Well, the ability to introduce foreign DNA into *E. coli* K-12 was — of course, the concept to do it — was arrived at in December of 1972. The first successful report was published about August or thereabouts in 1973. And there was a meeting of what they call the Gordon Conference, which are conferences held in the summer each year, very often at various schools in New England, where a number of the people present at this one conference on nucleic acid — it's like DNA — heard of the ability to introduce foreign DNA into *E. coli*....

"The scientists were a little concerned that one might endow *E. coli* K-12 with increased potential, say, to cause disease to humans, or say, if you put the genetic information for a tumor virus in *E. coli,* there was the fear that the virus might escape from the *E. coli* and, because of the large numbers of bacteria in the intestine, caused an increased incidence of cancer, colon cancer, etc....

"And so they wrote a letter to the National Academy of Science indicating the concern on the part of the scientists and asked that the Academy establish a committee to kick it around and see what they thought.

"Paul Berg was asked to chair this committee and they wrote a letter that was published in July of 1974, in *Nature* and in *Science,* indicating their concern about this and suggesting that certain experiments, wherein one might introduce the genetic information from tumor viruses, or where you might introduce the potential of *E. coli* to produce potent toxins, that those experiments be deferred until such time as there had been an international meeting and more discussion as to the potential biohazards of the research.

(The 1973 conference was in New Hampshire, with 140 leading molecular biologists attending. They were electrified on learning of the new work. Dr. Maxine Singer, a DNA specialist at the National Institute of Health, recalls: "Here was someone talking about putting two kinds of DNA together." The resulting self-policing, which asked for sanctions on further research, was the first example in the scientific community since 1939.)

(Dr. Curtiss then wrote his long memorandum, mentioned above, mailed to some 2,000 members of the scientific community all over the world, calling attention to a number of points he thought the Berg Committee had missed. "That was understandable," he now says, "because most of the people on the Berg committee were virologists; they weren't familiar with all aspects of microbial genetics, nor were they particularly well attuned to infectious diseases, or the role that plasmids play in contributing to viral pathogenicity of microorganisms. I thought at the time there should have been a number of other types of experiments which probably should not have been done, because there is more to disease than just toxins or just antibiotic resistance or just tumor viruses."

His memo was dated Aug. 6, 1974. His thinking changed between then and April 12, 1977, when he wrote the second widely distributed memorandum that concluded:

"In summary, I am convinced, because of the need for a sequence of errors and improbabilities of constructing a microbe that both has a competitive advantage and displays a harmful trait, that construction and use of *E. coli* K-12 strain with recombinant DNA poses no threat whatsoever to humans (or other organisms) except for the remote chance that an individual constructing or using such strains as discussed above ... might experience some ill effects."

No monster bugs were likely to escape a laboratory conducted in a normal, cautionary manner with professional standards. He expressed the fear in that April letter that "we are about to embark on excessive regulation of an important area of biomedical research based almost solely on fear, ignorance and misinformation."

Some Experiments Still 'Not Smart'

However, there are certain experiments he still doubts are safe — like putting a botulism toxin in *E. coli,* for example. "I don't think it's a smart thing to do or anything that would be of any benefit to mankind if we did it. That's a forbidden experiment. By and large the Asilomar conference (in February 1975 on California's Monterey Peninsula) recommended that some of the experiments just not be done, like putting in toxin genes and tumor virus genes."

What has really changed the whole picture is Dr. Curtiss's own great contribution — the development of a self-destruct transmuted little critter he dubbed (last year) *E. coli x*1776, in honor of the Bicentennial. He takes delight in the fact that British, in common with microbiologists all over the world, must use his mutant, which cannot survive outside a laboratory and cannot colonize or even live in the human intestinal tract, without its laboratory chemical diet.

He and his UAB staff spent tens of thousands of man-hours developing the fail-safe *x*1776 (pronounced, for the Greek letter, *Chi* 1776). For that achievement, The National Institutes of Health, which has imposed its own stringent guidelines for recombinant DNA research, certified it for use in genetic engineering experiments and Dr. Curtiss has shipped his bugs all over the world.

When *Time* magazine paid him the second of two tributes in August, it said that his comments on the new safety, with *x*1776, were "reassuring — still, they do not confront a problem that lends heat to the arguments about control, the general question of whether it is wise or moral to tinker with genetic engineering...."

The dispute over whether it is wise or moral can perhaps best be summarized in two contending arguments. The first position is that of retired Columbia Biochemist Erwin Chargaff, who asks: "Have we the right to counteract, irreversibly, the evolutionary wisdom of millions of years in order to satisfy the ambition and the curiosity of a few scientists?"

The second position was stated by Molecular Biologist Stanley Cohen, of the Stanford University School of Medicine. Noting that man has been intervening in the natural order for centuries, by breeding animals and cultivating hybrid plants and, more recently, by the use of vaccines and antibiotics, Cohen adds that it was Chargaff's "evolutionary wisdom that gave us the gene combinations for bubonic plague, smallpox, yellow fever, typhoid fever, polio and cancer."

The Medical Future

What will the future of DNA research hold for the practicing physician? Dr. Curtiss is cautious, but he believes there will be new vaccines at a time when antibiotics are becoming less and less effective; reagents that will allow for early diagnosis of infections; a diversity of hormones; insulin; and so on.

Possibly, far down the pike, there will be a substitute for fertilizers that may make the deserts bloom.

Dr. Curtiss is the father of four grown children.

He teaches medical and dental students at UAB, reviews Science Foundation grants, serves on many international committees, including one on leprosy, and is in all contributing significantly to what he sees as the objective of science, human welfare, so that "the practicing physician can end up having a better success rate, which is the goal of all of us — we are dedicated to improving health care... Just like those drugs that Charlie Alford and Rich Whitley have used. (Drs. Charles A. Alford and Richard J. Whitley, whose effective treatment of herpes simplex encephalitis was reported on in the September *Journal.*) It would have been inconceivable to ever have tried these drugs before we knew anything about DNA, the mechanisms of DNA replication. And so there is basic knowledge, 10 to 20 years later, giving you a means of control."

Dr. Curtiss is a formidable proponent of scientific inquiry. Senator Kennedy and Secretary Califano must reckon with him if they proceed with their plans (now stalled, apparently, as the furor has died) to restrict DNA research. ●

Survey Of CME Record-Keeping Procedures

By George D. Oetting, Ed.D.
Director of Education

"Make sure all doctors know well in advance that the deadline for compliance is approaching, list the reasons for exemption and stick to them. Brace yourself for some of the most ludicrous excuses you ever heard."

These words of wisdom were part of the first return I received on a recent survey we conducted of the 17 other state medical societies, who have established CME membership requirements as a condition of membership.

As you know, our Association decided several years ago, after considerable discussion and debate, that starting in 1979, all members would be required to attain the AMA Physician's Recognition Award, or its equivalent for continued Association membership.

This, in itself, was a major commitment; however, the mechanics of implementing such a directive are equally as complex and probably not fully realized at the time the initial philosophical decision is made.

Being currently at the point where this philosophy needs to be converted into nitty-gritty administrative details, we felt it would be useful to survey all other associations who are in the same boat—hopefully to benefit by their past experiences (both successes and failures).

This was accomplished this summer in the form of a letter and questionnaire sent to each of these societies, asking a number of questions about the way they keep records of CME completions, the kinds of information kept, the way it is stored, the equipment used to perform this function and any other general comments and suggestions.

The response was most satisfying, with 16 of the 17 societies sending a reply. As with most homemade surveys, some of the questions did not work as hoped, and also responses were not made to all questions. So the following summary should be considered just a very subjective compilation of what I perceived to be the major trends:

a. Most associations are keeping their CME records in some sort of manual file. (With the exception of the bigger associations, which use some sort of computer.)
b. In most instances, the doctors themselves are required to furnish the CME information to some other agency. There was only one case where the CME producer actually provided direct information on CME attendance to the society.
c. Most information seems to be manually entered into the system through typing, key punching, or cards.
d. On the types of CME information maintained, the societies were about equally divided, with about one-half keeping information of CME by categories, and the other half keeping just the "bare bones" of name, how they were certified, and the date certification expires.
e. Most information seems to be stored in the traditional office setting, e.g., file cabinets, cards, etc.
f. Most societies do not summarize CME information for their membership. A few do send out some sort of report, but this is the minority.
g. The societies who did use more complicated equipment, appeared to tie it in with other society record keeping systems, rather than just for a CME record keeping system.

I love at least one open-ended question in each suvery I have ever devised; and, in this one, some delightful and very incisive responses were received when asked for any "words of wisdom" the society might have for us as we embark in this area. Here is a selected sample from various societies:

"Be very careful in selecting computer and programmer. Rely on manual systems until authorization system proves itself. Don't get fancy or overly elaborate in your record system."

"Be sure of a well-written computer program."

"Go slowly with compulsion."

"Until the state of the art improves, don't be romanced by computer firms who say the job can be data-processed; our experience indicates it can't. As you embark on the mandatory program you will find that almost unlimited amounts of personal one-on-one contacts with recalcitrant or reluctant members the first few years will make your job much easier in the long run.

"Why don't you come and see us. We've been in this since 1970 trying to inform our members about the program. I think we could give you a lot of advice and maybe help on some easy ways to get at the end result."

"We are looking for 'words of wisdom'."

Overall, the survey results seemed to emphasize that we should proceed slowly in the record keeping system and expend considerable effort in educating our membership on requirements and procedures.

The survey results were considered by the Council on Medical Education at its Sept. 25 meeting, when policies and procedures were being formulated on CME record keeping procedures for our own Association. The Council decided that, initially, the record keeping system for MASA members would be kept simple. Basically, it would be geared to meet the specific requirements of Chapter 2 in the Constitution and Bylaws:

1. The MASA Education Department will keep a record of how each member achieves his CME certification. (AMA-PRA, AAFP or other approved methods).
2. The MASA Education Department will also establish a screening system to insure that everyone meets this requirement, and will report this information periodically to the Board of Censors.
3. A reporting system will also be established to secure needed information from each MASA member on how he has met this membership requirement.

We are incorporating these record-keeping procedures into a mini-computer system (NCR 8230) which will be installed in the late fall. This



system will be primarily used for the maintenance of membership records, general bookkeeping and billing for the whole Association, but we have programmed this additional capability to maintain needed CME information.

It would be nice to have more detailed CME information available to the MASA central office and also for each member; however, maintaining extensive CME information, and providing detailed printouts to the membership would be a very complicated and expensive process. The Council felt that we should first get the required system working satisfactorally.

The NCR 8230 has an add-on storage capability and it would be possible in the future to expand our CME record information if deemed appropriate. In the currently established record-keeping system, for the AMA-PRA and most other programs, the physician himself has to maintain and furnish information to some organization on how he has met the CME requirements.

The system must start with the physician himself, and it appears that any printout provided by the Medical Association would actually just be a duplication of information that the physician already had.

During 1978, the MASA Education Department will be establishing files and entering information into the NCR 8230 system on the CME status of each MASA member. Right now, we are in the voluntary period of the CME membership requirement (July, 1976 - July, 1979).

We will use 1978 to get the system going, and start gathering information from the membership, so that it will not be a crash project in 1979, when mandatory requirements are activated.

Further details on the record-keeping procedures will be outlined in future *Journal* and *MD* articles. ●

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- □ dosage forms to meet individual patient needs

For asthma management...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-74-B/W

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

ACUTE LEUKEMIA

CONTINUED FROM PAGE 43

2. Smith JP: Chemotherapy of ovarian cancer. Cancer 30: 565-1571, 1972.
3. Rosner F: Acute leukemia as a delayed consequence of cancer chemotherapy. Cancer 37: 1033-1036, 1976.
4. Holland JF: Epidenic acute leukemia. N Engl J Med 283: 1165-1166, 1970.
5. Davis HL: Prout MN, McKenna PJ, Cole DR, Korbitz BC: Acute leukemia complicating metastatic breast cancer. Cancer 31: 543-546, 1973.
6. Harris CC: The carcinogenicity of anticancer drugs: a hazard in man. Cancer 37: 1014-1023, 1976.
7. Weisburger JH, Griswold DP, Prejean JD, Casey AE, Wood HB, Weisburger EK: The carcinogenic properties of some of the principal drugs used in clinical cacancer chemotherapy. Recent Results Cancer Res 52: 1-17, 1975.
8. Penn I: Second malignant neoplasms associated with immunosuppressive medications. Cancer 37: 1024-1032, 1976.
9. Kyle RA, Pierce RV, Bayra ED: Multiple myeloma and acute myelomoncytic leukemia (report of four cases possibly related to melphalan) N Engl J Med 283: 1131-1125, 1970.
10. Gonzalez F, Trujillo JM, Alexanian R: Acute leukemia in multiple myeloma, Ann Intern Med 86: 440-442, 1977.
11. Sortel G, Jafari K, Lash AF, Steptto RC: Acute leukemia in advanced ovarian carcinoma after treatment with alkylating agents. Obstet Gynecol: 67s - 71s, 1976.
12. Khandakar JD, Kurtides ES, Stalzer RC: Acute erythroleukemia complicating prolonged chemotherapy for ovarian carcinoma. Arch Inter Med 137: 355-356, 1977.
13. Reimer RR, Hoover R, Fraumeni JF, Young RC: Acute Leukemia after alkylating-agent therapy of ovarian cancer. N Engl J Med 297; 177-181, 1977.

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DIGEST—STATE COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health, at its regular meeting on Nov. 16, 1977, took the following actions:

- Confirmed the appointment of a Registrar of Vital Statistics for Limestone County and Deputy Registrars for Jefferson County and Perry County.
- Concurred in recommendations of the Hospital Licensure Advisory Board.
- Received a report on the deteriorating bacterial quality of oyster samples collected from the consumer market and was advised of continuing enforcement activities in concert with any help that may be obtained from the Food and Drug Administration. The State Committee of Public Health supported the enforcement actions being taken by the State Health Officer in this regard.
- Approved the initial issuance of Assurance of Need for 13 health facilities.
- Concurred in the extension of Assurance of Need for one hospital.
- Concurred in favorable findings and recommendations for Springhill Memorial Hospital, Mobile, to institute a data processing system.
- Approved a request from Lee County Hospital, Opelika, for lease of a Computerized Axial Tomography unit based on exceptional justification for both need and economy in quality patient care.
- Received information on negotiations with the Regional Office of HEW with reference to the Alabama Certificate of Need Law and proposed Procedures Manual changes.
- Supported the formation of a Medical Facilities Task Force (Title XVI) and designated representatives to assist in joint development of this plan in concert with the Health Systems Agencies' representatives.
- Approved a Fourth Edition of a "Plan of Action for Selected Health Manpower — Alabama" as Part C of the preliminary State Health Plan.
- Approved a request from the Mississippi State Board of Health to participate in a survey to determine the severity of human fire ant stings.
- Was advised of enforcement actions by the State Health Officer to assure safe drinking water in a trailer court and of an enforcement order dealing with the control of a source of radioactivity by an industrial firm.
- Received a report regarding National Health Service Corps assignments.
- Referred to the Council on Prevention of Disease and Medical Care the request to review current progress and status of immunization in Alabama.
- Received a report from the Council on Dental Health indicating that there is no need for regulations by the State Committee of Public Health for the handling and storage of mercury in dental offices. Approved guidelines for comprehensive dental programs conducted in a dental office.
- Received a report on the audit of Medicaid for October 1, 1975, through September 30, 1976.
- Deferred for study for one month a proposal by the Commissioner of Agriculture for a change in milk regulations to include the sale of ½% low fat milk in Alabama.
- Approved two new vital records forms to be implemented Jan. 1, 1978, as follows: Certificate of Fetal Death (VS-3), and Report of Divorce, Annulment or Legal Separation (VS-16).
- The next meeting of the State Committee of Public Health will be Dec. 21, 1977, at 10:00 a.m., at the Medical Association Building, 19 S. Jackson Street. ●

Student Health Service Physician
University of Alabama
In Birmingham Medical Center

The University of Alabama in Birmingham invites applications for a full time and/or part time physician for the Medical Center Student Health Service.

The Student Health Service is a comprehensive medical facility for the maintenance of students' physical and mental health. The Student Health Service is centrally located in the Medical Center and is appropriately staffed and equipped to provide ambulatory care.

Currently the Student Health Service is responsible for the health and well being of some 3,000 professional students in medically related fields.

Criteria for the position include:

1. M.D. degree plus experience in primary medical care.
2. Evidence of ability to cope with special health problems of students.

Applications with curriculum vitae should be submitted to:

Thomas H. Alphin, M.D.
Deputy Vice President for Health Affairs-Administration
University of Alabama in Birmingham
University Station
Birmingham, Alabama 35294

Affirmative Action — Equal Opportunity in Education and Employment.



HEALTH ACTION WORKSHOPS NOVEMBER 28 - DECEMBER 1

Recently in the Gallup Poll's ninth survey of parents' attitudes toward public schools and education, interviews with 1,506 adults in over 300 scientifically selected localities were reported. This poll was funded by the C. F. Kettering Foundation.

Topics parents were most interested in did not differ markedly between college graduates and parents who had virtually no education, perhaps indicating home concerns were similar regardless of socio-economic or educational scale.

Parents questioned revealed that they wanted closer involvement with schools, with instructional and guidance courses available to enable them to be directly involved in the educational process. They felt this would help their children to be better students.

They also expressed feelings that problems of discipline, motivation, work and study habits, drug and alcohol abuse, and many others originate in the home, and even with the best efforts of teachers, solutions could be likely to fail without parental concern and involvement.

From a total of 16 suggested topics, parents of children now attending school were asked to choose those which most concerned them. The top choices of all parents interviewed were "What to do about drugs, smoking, and use of alcohol?" (This reflected concerns of youths themselves, especially about alcohol, in a recent Gallup Youth Survey, along with problems of "getting along" with their parents.)

Surprising to me was the fact that parents of children whose eldest were ages 13-20 years, while listing "What to do about drugs, smoking, use of alcohol" as the *first* problem, "How to improve health habits," number a low *15.* If the child was 12 years or younger, "How to improve health habits" was number 16. This indeed shows that parents must learn what comprehensive health education is. We are trying to provide information to form a broad base of support for health education in Alabama schools. It is my hope that informed parents will force this reality.

Separately, already the Alabama Congress of Parents and Teachers, Inc., and the Auxiliary have had "Health Awareness" and "Health Through Education" workshops. Now the Auxiliary, with the Alabama Congress of Parents and Teachers and the Alabama State Department of Education, will sponsor four district Health Education Action Workshops, Nov. 28-Dec. 1.

Invitations have been sent to every Alabama superintendent, principal, health coordinator, legislator, county auxiliary and P-TA council. Even if your county medical society has no organized auxiliary, please alert your wife or husband about these vital informative sessions.

Joining me on the Health Education Action panel will be:

Dr. Wayne Teague, State Superintendent of Education; Dr. Mabel Robinson, Health Education Specialist; Dr. Kennith Blankenship, State Department of Education; Dr. James Sharmon, Chairman of Health Education, UAB; Mrs. George Stephens, Alabama PTA President.

Also participating will be:

Riley Lumpkin, M.D., MASA member, Assistant Dean, University of Alabama, College of Community Health Sciences; State Senator Bert Bank, Chairman, Senate Health Committee; Mr. Ron Kensey, Director, American Heart Association, Alabama Affiliate; and other outstanding members of Alabama's Health Education Task Force.

The meetings will commence at 10:00 a.m., continue through "dutch" luncheon ($7), until 3:00 p.m.

Our speakers' "caravan" will begin in Huntsville, Nov. 28, at the Hilton Inn. Mrs. John Montgomery, 811 Tannahill Drive, SE, Huntsville, 35802, is Auxiliary Chairman in this district.

Birmingham's meeting place is the Hyatt-Regency, Nov. 29, with Mrs. Jack Strong, 2109 Woodwind Circle, Birmingham, 35216, as Auxiliary Chairman.

Nov. 30, the Governor's House, Montgomery, is the meeting site. Mrs. John Sumners, 2821 McGehee Road, Montgomery, 6111, Auxiliary Chairman.

The last stop will be Dec. 1, Sheraton Inn, Mobile, and Mrs. Leland Edmonds, 3929 Yester Place, Mobile, 36608, is Auxiliary Chairman. All district chairmen are ready to take reservations by check ($7).

This could be a very important day spent to insure future health and self health responsibility for our children and future adults. Enthusiastic attendance is what we need. We are trying to *help* you ultimately by getting an ongoing program of correct information to students and parents before it's too late.

Help us show our educators and legislators how concerned we are as medical families and PTA members, or Health Education will be taught in only a few counties of Alabama.

Helene

MRS. JOHN S. TAYLOR

PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

DERMATOLOGY: Age 28; University of Alabama, 1974; seeking practice in town of 30,000 plus population. Available July 1978. LW-001.

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board eligible 1978; National Board; Available July 1, 1978. LW-004.

FAMILY PRACTICE: Age 30, Duke University 1968, interested in working with a faamily practice, general practice, or emergency room physician while serving a straight internal medicine internship at University of Alabama Hospitals in Birmingham during the period July 1977-June 1978. LW-005.

FAMILY PRACTICE: Age 26; University of Tennessee, 1974; American Board certified; National Board; will be American Board eligible 1978; seeking practice in town of 5,000-50,000 population. Available February 1978. LW-006.

FAMILY PRACTICE: Age 31; University of Alabama, 1974; National Board; interested in practicing in a medium to small town with high physician needs. Available immediately. LW-016.

FAMILY PRACTICE: Age 28; Washington University, 1975; seeking practice in town of 15,000 plus population near Gulf Coast. American Board eligible; National Board. Available July 1978. LW-017

GASTROENTEROLOGY/INTERNAL Medicine: Age 29; Medical College of Georgia, 1973; National Board certified, American Board certified and passed Flex Examination; seeking partnership, multi-specialty group, single specialty group, Institutionally based or research. Available July 1978. LW-06624.

GENERAL PRACTICE: Age 35; University of Alabama, 1975; seeking practice in northern or central Alabama in town of 50,000 or more population. Available April 1978. LW-002.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; Presently in the army completing a two year obligation, (wife is also a Board eligible Internist and is presently completing an infectious disease fellowship.) Wish to join a small group in general internal medicine preferably a small city with rural surroundings. Available August 1978. LW-018. (See LW-019.)

INTERNAL MEDICINE/RHEUMATOLOGY: Age 31; Ohio State University, 19722; American Board certified; American Board eligible; seeking single specialty group, institutional based or multi-specialty group. Available July 1978. LW-09159.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 30; University of Louisville 1973; seeking clinical practice. Available July 1978. LW-007.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; seeking practice in general internal medicine with a small group, preferably a small city rural surroundings. Available July 1978. LW-019. (See LW-018.)

OPHTHALMOLOGY: Age 30; University of Illinois, 1972; American Board certified; National Board; seeking single specialty group, assistant or associate in the Birmingham or Huntsville area or with a town of 100,000-250,000 population. Available July 1978. LW-010.

ORTHOPEDIC SURGERY: Age 32; Medical College of Georgia, 1971; will be American Board eligible 1978; seeking single specialty group, partnership, industrial or institutionally based, or solo. Available January 1978. LW-06158.

ORTHOPEDIC SURGERY: Age 32; University of Texas, 71; seeking practice in town of 25,000-30,000 population. Available July 1978. LW-015.

OTOLARYNGOLOGY: Age 30; Ohio State University, 73; Will be American Board eligible 1978; seeking assistant or associate practice in town of 30,000-100,000 population. Available July 1978. LW-012.

PEDIATRIC HEMATOLOGY/ONCOLOGY: Age 28; University of Michigan, 73; American Board certified; National Board certified; seeking practice in Birmingham. Available July 1978. LW-013.

SOPHOMORE medical student—age 22, interested in a town or hospital assiting with medical school costs in return for service there in general/family practice. Available 1980. LW-01.

SURGERY: Age 32; Washington University, 1971; American Board eligible; seeking partnership, single specialty group or multi-specialty group. Available July 1978. LW-09077.

SURGERY: Age 31; University of Alabama, 1973; National Board certified; will be American Board eligible 1978; seeking partnership, single specialty group, solo or multi-specialty group. Available July 1978. LW-07827.

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

PHYSICIANS WANTED (Opportunities for Practice)

ALL SPECIALTIES—urban and rural Alabama private practice opportunities including Assistant Prof. Community Health, $40,000 guarantee, moving, other fringes. PW-17.

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and

larger cities contains a progressive 74 bed hospital. Ample opportunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital privileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

GENERAL PRACTITIONER'S 2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-5

GENERAL PRACTITIONER—Opportunity in central Alabama town of 4500 population. Within 17 miles north of Montgomery, Alabama. The finest recreational areas in Alabama consisting of 2 large lakes. Newly expanded 69 bed hospital with 8 active staff members. Invitation to visit with expenses paid will be directed to those qualified. PW-9.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER Wanted—Town of 6,000 population, trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities include golf course, country clubs, tennis courts. PW-7

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16. ●

LIFE SUPPORT COMMUNICATIONS CONTINUED FROM PAGE 49

Two-way voice communications among the paramedic and the physicians at both Druid City's regional medical control and University Hospital would be possible.

Boon For Rural Paramedics

The paramedic operating from rural county locations will have and enjoy identical radio/telephone ECG capabilities as the paramedics operating within Tuscaloosa County. In both cases, the transmission of ECG/voice and the availability of responsible physician direction at a distant location is generally as assurable and as reliable as is a standard telephone line and dedicated telephone instrument.

One of the salient features of this UHF/telemetry system is that paramedics in the field communicate using radio; the physician in the medical hospitals will communicate using standard telephone instruments. An accoustical coupler and a medical console as used in the regional medical control center is an optional feature that may be elected by the outlying associated rural hospitals.

Paramedic vehicles operating in the counties will utilize direct voice/ECG contact with Druid City Hospital (regional medical control) on a continuous 24-hour per day basis.

Each mobile unit employs a vehicular repeater because of the rural area, transmission and distance covered to each RTSS. The vehicular repeater will use standard EMS-UHF medical channel 468.000 range to transmit to the RTSS.

The vehicular repeater gets its signal from the portable radio that transmits from the standard EMS medical frequency of 458.000 range using one watt power to the vehicular repeater.

Simultaneous Episodes

Patient monitor consoles and associated equipment to be installed will permit Druid City to handle several episodes simultaneously. All agreements relative to protocol and triage will be in place to assure medical control as outlined in HEW requirements.

The operating procedures used by the paramedics will be identical regardless of whether they are operating under medical control provided by the responsible physician at the local county hospital or by the physician at Druid City Hospital (regional medical control). ●

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POSITIONS AVAILABLE

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to $40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 487, Carrollton, Alabama 35447, or call Frank Cochran COLLECT 367-8138, evening hours 553-2198.

WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

INTERNIST, FAMILY PRACTICE, ANESTHESIOLOGIST
UNIVERSITY MEDICAL CENTER
MONTGOMERY, ALABAMA

Beautiful new, physician owned, University Medical Center Hospital will be completed January, 1978. Located near University of Auburn in Montgomery, Alabama. Opportunity for either group or solo practice. Montgomery is a lovely city which offers excellent schools, churches, and recreation facilities. Physicians interested in professional and financial rewards, please write with C.V. or call 504-837-6456. James R. Mattingly, Assistant Vice President, Physician Relations, QUALICARE, INC., P. O. Box 24189, New Orleans, La. 70184.

POSITIONS AVAILABLE

PHYSICIAN NEEDED FOR A MODEL RURAL PRIMARY HEALTH CARE CENTER. Excellent Hunting, Fishing, Water Sports, Greyhound Racing and Pari-Mutual Wagering. $35,000 - $40,000 Salary Range plus 18% Fringe Benefit Package, two weeks vacation, office hours 8-5 daily with no evening duties or calls. For futher information please contact: James W. Coleman, West Alabama Health Services, Inc., P. O. Box 449, Eutaw, Alabama 35462, (205) 372-9225.

FOR RENT

BEACH HOUSE TOWNHOUSE on the beach at Gulf Shores, Alabama. Pool/minutes from three golf courses/all furnishings included/two bedrooms/1½ baths/built-in kitchen/2 car carport/private deck. APRIL & SEPTEMBER—$40.00 per day (3 day minimum); MAY 1-LABOR DAY—$50.00 per day (1 week minimum). CALL FOR RESERVATIONS—AC205/269-4094 or 281-3102.

MEDICAL OFFICE for lease in Tuscaloosa, with or without equipment. Building is 1½ years old, 1650 square feet, four examination rooms, large reception room; one unit of four-office complex; two medical offices, two dental offices. Fully equipped, if desired, for instant practice; equipment purchase optional. Ten blocks from Druid City Hospital. Separate equipment sale negotiable. Inventory available. Contact: Paul D. Nelson, D.M.D., 601-A Hargrove Road East, Tuscaloosa. Phone (205) 345-7134.

OFFICE FURNITURE & EQUIPMENT

NEEDED: waiting room furniture, business equipment, examining table, etc. Jefferson, Montgomery, Mobile, Huntsville county areas. Contact: 871-0505, Birmingham.

Is there a tablet containing *only* an expectorant and *only* Glyceryl Guaiacolate? YES!

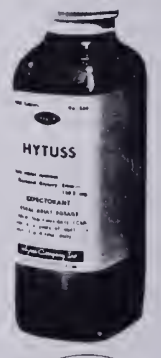


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(GLYCERYL GUAIACOLATE 100mg)

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3. Measured tablet dose.
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An identifiable white, scored tablet which significantly stimulates the secretion of respiratory tract fluid.



Composition: Each sugar-free compressed tablet contains glyceryl guaiacolate 100mg **Action and Use:** This preparation utilizes the effective expectorant action of glyceryl guaiacolate which significantly stimulates the secretion of respiratory tract fluid. The increased flow of less viscid fluid favors expectoration and has a demulcent effect on the tracheobronchial mucosa. The primary usefulness of Hytuss Tabs is to promote the change from a dry, unproductive cough to a productive cough. Hytuss is therefore useful in treating coughs due to the common cold, bronchitis, laryngitis, tracheitis, pharyngitis, influenza and the measles. The expectorant action of Hytuss may also provide symptomatic relief in some chronic respiratory disorders when the patient experiences spasms of dry nonproductive coughing. **Precautions:** Extremely large amounts may cause nausea and vomiting. **Administration and Dosage:** *Adults*—1 tablet four times daily. *Children*—6 to 12 years of age; ½ tablet 3 or 4 times daily. HOW SUPPLIED: White, scored, sugar-free, tablet in bottles of 100 - 1,000 - 5,000. **Product Identification Mark:** Hy. **Literature Available:** On request.

Available through all drug wholesalers.

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JOURNAL

of the Medical Association of the State of Alabama

DECEMBER 1977

V.47 #6



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A character all its own.



Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

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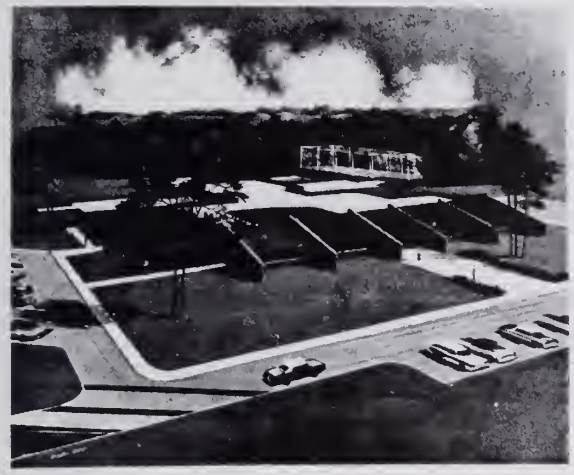
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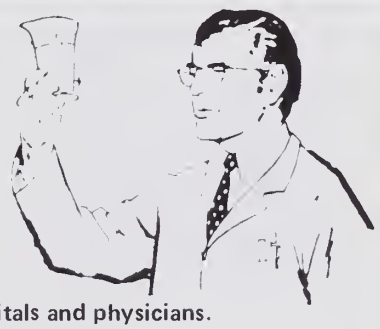
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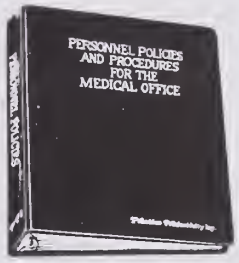
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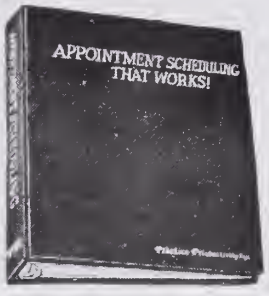
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19 VIEWS

Many Alabama physicians, caught in the toils of CME, might be inclined to agree with Oscar Wilde's irreverant comment more than 80 years ago:

"Education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught."

Certainly, in the art and science of medicine there are some things that cannot be taught: skills acquired through experience, for example. No amount of CME can ever replace these, nor does it attempt to. What it does try to do is to help the busy physician stay current with medical advances.

CME is not only demanding; it is also becoming very expensive, as MASA's Director of Education, George D. Oetting, Ed.D., discusses on page 10.

Since arriving at MASA early in 1977, Dr. Oetting has been a busy man, supplying not only the needs of physicians but of their assistants as well. Working with county medical societies, he held 23 workshops for medical assistants around the state in 1977.

What he has planned for 1978, for physicians and their assistants, will be announced as appropriate in *The Alabama M.D.* and in the *Journal.*

Dr. Oetting and the Council on Medical Education have repeated an observation that bears even more repetition: "The more CME is accredited locally," as he puts it in this month's article, "the less will be the need for physicians to leave their local area to seek needed CME programs."

At last count, 12 Alabama hospitals and seven specialty societies, county medical societies or other organizations had been accredited through MASA for their CME programs. At least 10 other organizations are in the accreditation process.

Dr. Oetting stresses the importance of this: accreditation of local or nearby facilities and organizations makes CME more convenient, less time-consuming and, not least, cheaper.

MASA is empowered to act as the review agency for organizations seeking CME accreditation. A comprehensive brochure explaining the process of developing local programs for Category I credit has been approved by the Board of Censors. It is available from Dr. Oetting.

Visits to hospitals and other organizations are planned for 1978 — all toward the end of making CME as convenient and as economical as possible for the time-short physician.

S. Lon Conner
Executive Director

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The Tie That Binds

A few months ago, while visiting in Albuquerque, I was told the following true story by one of my friends:

An elderly Indian sheepherder had been plagued with fainting spells. He would be feeling well and suddenly fall to the ground unconscious.

After several weeks of this, he was finally convinced by his family that he should go to the Indian Health Service Hospital for an examination while another member of his family tended his flock.

He was examined and found to have a complete heart block. He was told that a new device could be implanted in his chest that would help his heart beat more normally and his fainting would stop.

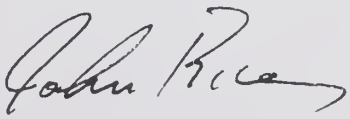
After many anxious hours, he agreed to be flown to Albuquerque by an Air National Guard helicopter where a pacemaker was installed and his fainting stopped.

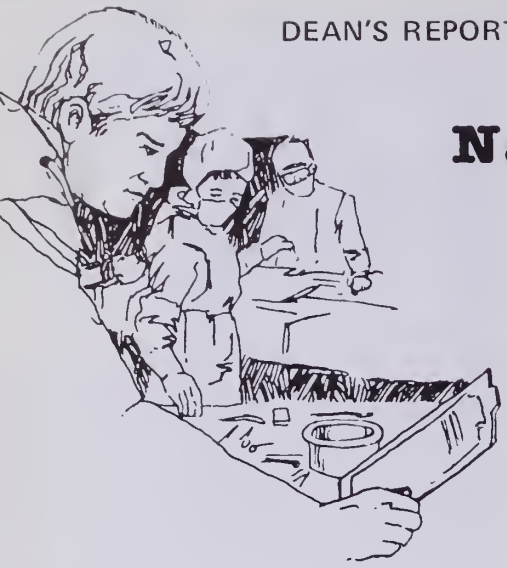
He was elated; he knew he would again be alert and able to protect his sheep from marauding coyotes and wolves. His life had purpose. He would endure, and for a few more months, a few years, he would continue to do what he had spent a lifetime doing — protecting his flock.

In the frantic, hectic, commercialized and contentious world in which we live, it is my great pleasure to remind you, the physicians of Alabama, that your dedication to your patients, your communities and your profession, your respect for human dignity, the sacrifices you and your families have made and continue to make, are an inspiration to me, your officers and your Censors.

Your Association staff and I send our best wishes for a happy holiday season and a prosperous New Year.

May the Little Lord Jesus rare back and clobber you with a miracle.





National Health Insurance: Two

James A. Pittman, Jr., M.D.
Dean
University of Alabama
School of Medicine
UAB
Birmingham

The Department of Health, Education & Welfare held public hearings in about 100 cities around the United States on National Health Insurance in October. One such hearing was held in Birmingham on Oct. 19.

At that time, Dr. Charles A. McCallum, now Vice President for Health Affairs at UAB, presented testimony for the University of Alabama in Birmingham. In prefatory remarks he made it clear that the positions given, because of the short interval between notice of the hearing and the holding of the hearing, had not been conceived or reviewed by the faculties of the schools or other units of the UAB Medical Center. Rather, the presentation represented comments from the Medical Center administrative officers.

I submitted a personal statement to the same meeting, though I did not present it verbally. It was not an official statement or a position of the School of Medicine faculty or administration, but was simply a statement from a physician practicing in Alabama. However, I believe many UAB School of Medicine faculty would agree with most elements of the statement.

Both of these statements are reproduced below.

Statement of Dr. McCallum

My name is Charles A. McCallum. I am both a physician and a dentist and am currently Vice President for Health Affairs of The University of Alabama in Birmingham.

The institution I represent is the major resource for the development of health manpower and the center for health-related research in the state. Our hospitals and clinics provide an important proportion of the health services for this region including tertiary care services. Because we are affected by Federal health policies, it is our public responsibility to respond to this opportunity and present our views on National Health Insurance.

Because of the shortness of time, this statement has not been developed or approved by the Trustees of the University, the administration or the faculty but is the response of the Medical Center Council of Deans that includes the Deans of five schools, the Chief of Staff and the Administrator of The University Hospital, and the Deputy and Assistant Vice Presidents of Health Affairs.

The Medical Center, with its five health professional schools, its hospitals and clinics, and a major commitment to health-related research, has a unique role to play in the health of the nation.

New Priorities

Any program of National Health Insurance will require a reallocation of resources and new priorities for funding. Such actions must not be allowed to destroy the academic health centers of this and other universities because:

(1) *The best possible education of health professionals is essential* regardless of the organization and payment mechanisms for services. We are educating health professionals in medicine, dentistry, optometry, nursing, allied health and in health administration, health planning and health education.

(2) *Biomedical and public health research are crucial* to the health of present and, more importantly, future generations of Americans. This is a special responsibility of the University Medical Center. We are engaged in major research programs of national and international importance in the basic sciences related to health in each of the clinical disciplines and in environmental and public health.

(3) *Teaching hospitals, like ours, provide certain services* that should be considered as special health resources. They provide an essential resource for the education of health manpower and are the sole source for certain tertiary health services. We have developed and make available many such services for the community, the region and the nation.

Modest Expansion

This Medical Center supports the participation of the national government in assuring that all citizens have available to them adequate insurance to provide for medical care in case of illness or injury. Although the vast majority of Americans presently are protected by private or public programs, there remains a group of marginal economic status who do not qualify for public programs and cannot pay for private insurance. A modest expansion for existing governmental programs to eliminate this problem seems appropriate. This expansion, coupled with catastrophic coverage for the middle income groups, should assure that all have adequate financing for medical expenses, and that no one will face financial ruin as a result of the costs incurred by illness or injury.

Such a program will retain the components of a pluralistic system that have proven workable over the past decades. We strongly oppose a dismantling of our existing system of providing and financing medical care.

Inexpensive Death

The care of the critically ill and injured is and will continue to be a very costly process. While we recognize the possibility of some savings by improving efficiency, the vast bulk of the cost of complex, sophisticated medical care can be affected only in one way: by eliminating that process of care. Just a few years ago patients with conditions of this nature died

quietly and inexpensively at home or in a conventional hospital bed. Methods are now available to actively intervene on behalf of the critically ill and injured. When costly intervention holds a reasonable promise of favorably influencing a patient's course, we cannot withhold such treatments. We detect no public outcry against intensive care units, open heart surgery, renal dialysis, etc. University medical centers are expected by the public to provide these services. The national government must recognize these circumstances when applying cost containment policies.

We conclude by urging that priority attention be given to: (1) closing the gap between Medicaid/Medicare coverage and private health insurance; (2) preserving the best features of our present pluralistic private and public system of health care delivery; (3) providing catastrophic health care coverage; and (4) encouraging better preventive health care measures by communities and individual citizens.

Build On Existing Programs

Meeting needs on the basis of established priorities, as we can, by building on existing functional programs, seems to us to be the least damaging to the economy as a whole and to our medical care system, while at the same time encouraging a desirable minimum of self-reliance and self-involvement on the part of the individual.

If payment out of tax funds for medical care is achieved by broadening the present methods to eventually include the average citizen, *when he has a real need for such help,* we shall, in our estimation, be proceeding both carefully and wisely.

Statement of Dr. Pittman

A "good health status" of individual members of the U.S. population cannot be achieved directly through legislation, particularly legislative regulation of services provided the health professionals. Rather, the achievement and maintenance of a good health status of the individual citizen can only be accomplished by his own personal attention to his personal habits and lifestyle and the availability of adequate food, shelter, basic clothing, and education. Governmental regulation may be necessary, however, to help control costs, if the health professions themselves are unable to accomplish this.

Thus, neither can a "national health insurance" accomplish the achievement and maintenance of a good health status of the citizens, nor is it such insurance that the citizens basically desire. A more appropriate and responsible designation for such a program would be "National Sickness Insurance." Obviously, areas of preventive medicine must be included, and public health measures must be assured for the community as a whole by the government. The main thrust of the program, however, should be assistance of individual citizens to obtain ready access to high quality care for the effective detection and alleviation of symptoms and disease processes without disabling financial stress.

Every citizen should have an insurance policy to help defray the cost of illness. Such a policy should cover a number of items in decreasing priority, the first being most important and essential to cover and lower priorities being covered only as additional funds become available. First priority should go to preventive measures, such as immunizations of the population against speciific illnesses, such as diphtheria, pertussis, tetanus, and poliomyelitis. Second priority should go to coverage of catastrophic illnesses and their care. Third priority should go to coverage of diagnostic examinations for people with symptoms, discovery of latent disease processes, and treatment to cure, correct, or ameliorate such conditions.

There is no way the government, or anyone else, can provide "the best possible medical care" or *all* desirable health services" for *all* the people. Thus, some very difficult choices must be made. In this regard, both the epidemiology of disease and cost/benefit analyses of diagnostic evaluations and therapeutic measures must be carefully and objectively considered in making these choices regarding scope of coverage.

Regardless of the funding mechanisms chosen, there must be some method of informing the participants as clearly and directly as possible of the costs of the program and involving them in some direct way in providing the funding, at least in some small measure. This might be accomplished in part by use of deductibles, coinsurance, or other mechanism of payment by the beneficiary at time services are rendered; or it might be via some charges to the beneficiary directly (as opposed, for example, to other or complementary charges to the beneficiary's employer) for the premiums to finance the program; or some other disincentive. Without some immediate involvement in costs and passage of information directly to the users regarding the costs of the program to them, the users, there will be little incentive for savings, ineffective attempts at cost containment by regulations (or effective only at the cost of entombing quality of care, and perhaps access as well) and eventual bankruptcy of the program.

Thus, the essential elements for a program of "national health insurance" are, in order of decreasing priority:

1. Recognition of the primacy of individual responsibility and overall social and economic conditions as determinants of personal health statutus.
2. Public funding and assurance of preventive measures, such as clean water and air, immunizations, and similar measures designed to protect the health of the community as a whole.
3. Special assessment of cost/effectiveness of diagnostic and therapeutic measures prior to choosing benefits and scope of coverage and/or on recurring review of such data.
4. Protection of individual citizens against financial disablement resulting from catastrophic illness, such as a major vascular accident or metastatic cancer.
5. Financial or other assistance to poor and low income citizens in meeting the costs of obtaining non-catastrophic medical care.
6. Incentives, particularly financial incentives, against overutilization or inappropriate utilization by either the consumer or provider of care.
7. Measures to assure quality of sickness care. ●

The Cost Of Getting Educated



By George D. Oetting, Ed.D.
Director of Education

Two-hundred and seventy-five dollars for a review of new concepts and techniques of the pulmonary function; $200 for a workshop on fiberoptic bronchoscopy; $75 for a two-day burn seminar; $495 for a one-week AMA/CME medical seminar – these are just a sample of the registration fees charged for CME programs which have come across our desk in recent months.

At present, the going rate for Category I CME programs presented by AMA *for its own AMA membership* is $10 per clock hour! Certainly you could easily document the same expensive statistics in the CME offerings that come across your desk every day.

The point of all of this is to emphasize the personal expenses involved in attending CME programs. Add to this the additional costs of hotel rooms, food, and transportation for out-of-town programs.

And, finally, add the cost of the loss of income to you by not being in the office when these programs are put on, plus the continuing cost of operating your office, regardless of where you are.

Put all these expensive statistics together and you can see that the actual cost to you per hour of CME credit is quite substantial. I won't attempt to calculate an average here since practice expenses will vary greatly; however, you might actually like to calculate this cost for yourself on some of your recent CME excursions.

Cash Flow

What can be done about this? Well, the CME producers do have certain expenses in putting on programs, and it is doubtful that these will decrease.

I sometimes wonder, however, if the only purpose is educational when I read magazines such as *Medical Meetings,* which explains in elaborate detail the procedures on promoting such meetings.

Perhaps my own personal feelings on this are best summarized in the comments of Richard W. Stander, M.D., American College of Obstetritians and Gynocologists, Director-Education, in the September 1977 issue of the 'ACOG Newsletter:'

> "A variety of organizations now sponsor postgraduate courses that vary not only in quality, but costs as well. Although most organizations accredited for development of postgraduate courses are making responsible efforts directed toward quality assurance and cost containment, there is more than a hint that others have entered the field to promote specific products or to improve cash flow."

Since it appears that the cost of these programs will not decrease, how then can you decrease the personal expenses of securing desired CME? Within the Medical Association this undoubtedly will become a matter of greater interest to everyone when CME membership requirements become mandatory, starting in July 1979.

One way that costs can be reduced is currently being actively pursued by the MASA Council on Medical Education. This is a program to encourage Alabama hospitals, state medical societies and organizations to seek, whenever feasible, the CME accreditation of their local activities.

It logically follows that the more CME that is accredited locally, then the less will be the need for physicians to leave their local area to seek needed CME programs.

12 Accredited Hospitals

As of Nov. 15, as this article is being written, there are 12 Alabama hospitals and seven specialty societies or organizations which have been accredited by the AMA for their CME programs. In addition, there are at least 10 organizations in some stage of the accreditation process.

What this accreditation means primarily, is that it is an official national recognition of the quality of an organization's CME offerings, and also allows these organizations to give Category I credit to some or all of their programs.

Because Category I CME credit (live CME presentations by an accredited organization) is the hardest to obtain, interest and support in local CME programs should increase to some extent, when physicians know that these programs will count as Category I. What the Council on Medical Education is hoping to achieve is to make the maximum amount of accredited CME possible, available within the local community through accredited meetings of the county medical societies, weekly or monthly general staff meetings at hospitals and state gatherings of specialty societies.

If only two of these meetings were accredited for Category I each month, each MASA member would easily meet his Category I CME requirements; in fact, he would have almost half of his total CME requirement met for a three-year period.

If these regular local meetings are supplemented by the special CME programs presented at various times around the state by the University of Alabama in Birmingham, University of South Alabama and other CME producers, it can be seen that our members could meet most CME requirements without the necessity for a great deal of time away from their practice.

Then, each member could save his days off and his pennies for the one or two special national meetings that he would like to attend annually, without the pressure of having to go to a lot of other meetings "just to fill in the squares" of his CME requirements.

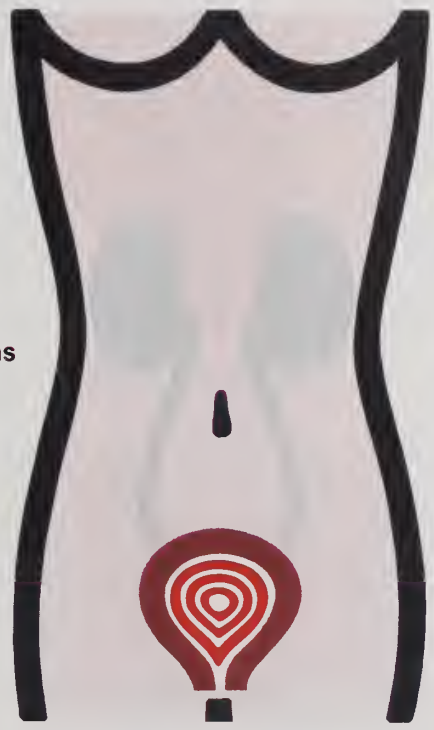
This is our goal. It will never be completely achievable in all parts of the state for all physicians on a completely equal basis; however, as we visit hospitals in your local area, talk to specialty societies and other people involved in CME activities, you may better understand why we are concentrating at present on the formal encouragement and recognition of local CME. ●

When pain complicates acute cystitis*

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl

for the pain for the pathogens



□ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

□ **Effective control of susceptible pathogens** such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris.*

□ **Appropriate antibacterial therapy:** up to three days therapy with Azo Gantanol, then 11 days with Gantanol® (sulfamethoxazole), 0.5 Gm tablets.

*Nonobstructed; due to susceptible organisms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

***Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

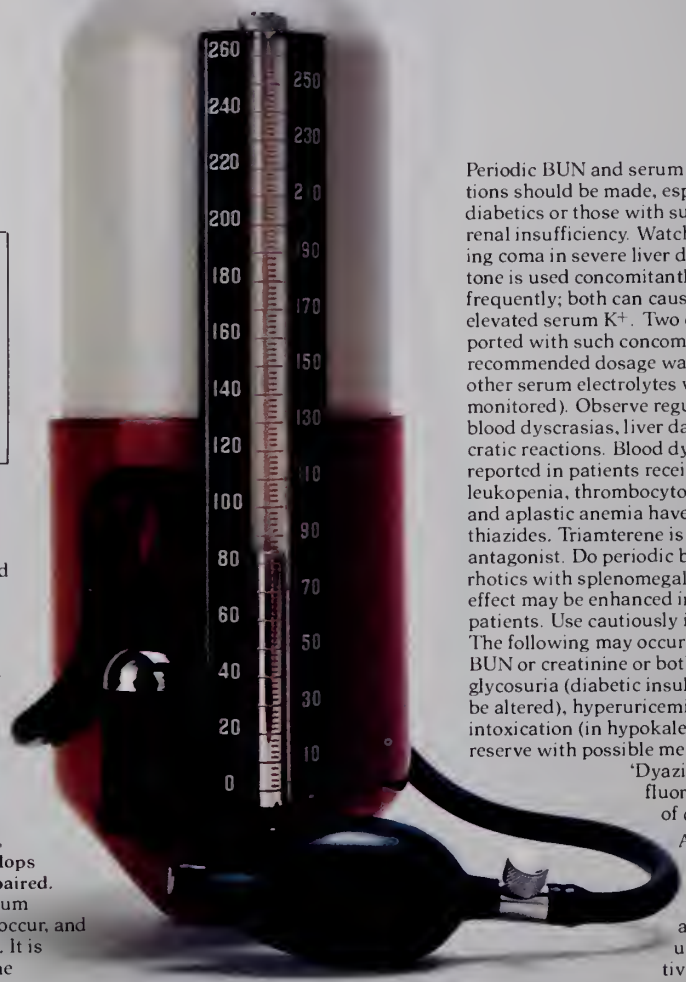
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

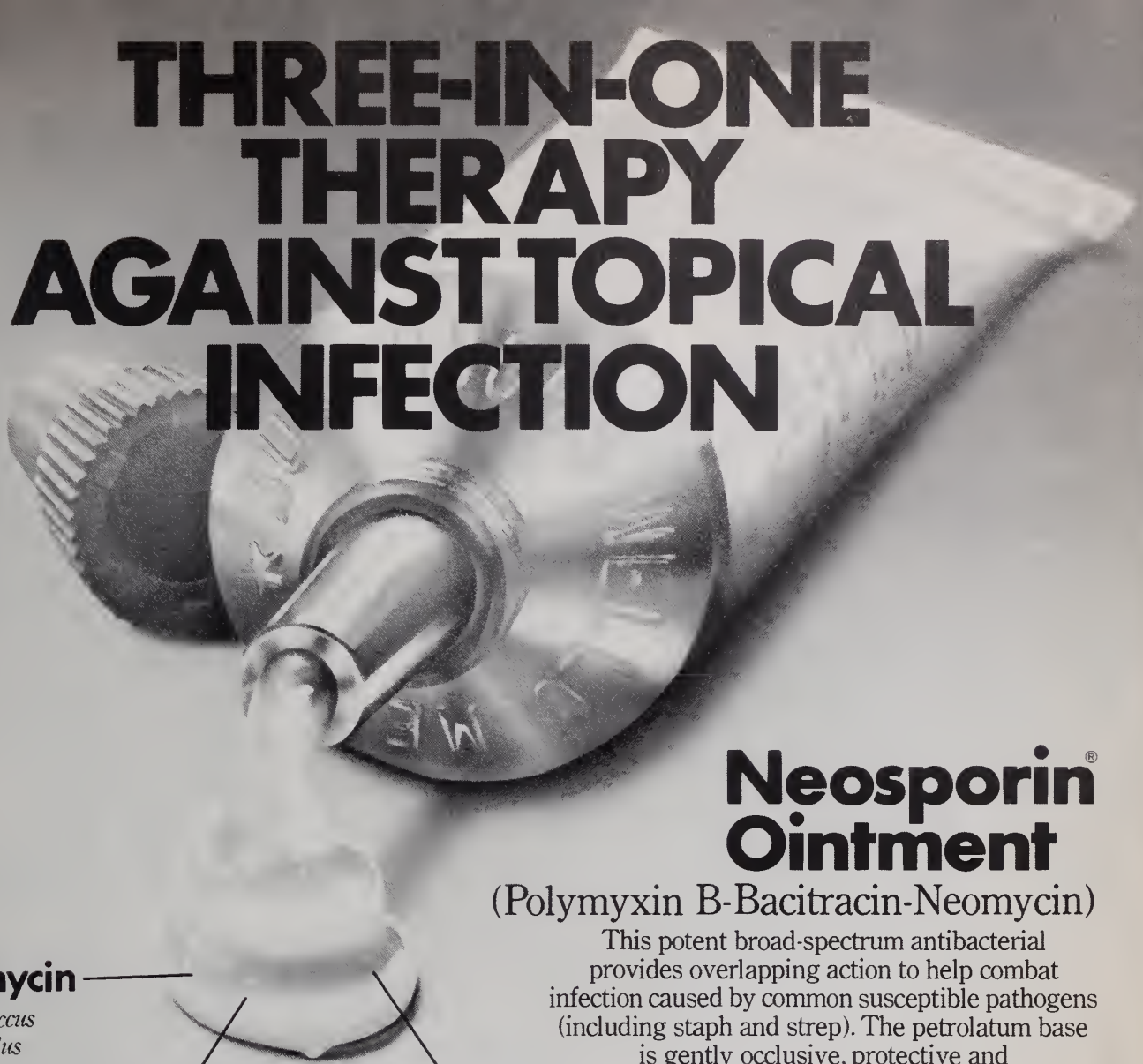
Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

THREE-IN-ONE THERAPY AGAINST TOPICAL INFECTION



Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

This potent broad-spectrum antibacterial provides overlapping action to help combat infection caused by common susceptible pathogens (including staph and strep). The petrolatum base is gently occlusive, protective and enhances spreading.

Neomycin

Staphylococcus
Haemophilus
Klebsiella
Aerobacter
Escherichia
Proteus
Corynebacterium
Streptococcus
Pneumococcus

Bacitracin

Staphylococcus
Corynebacterium
Streptococcus
Pneumococcus

Polymyxin B

Pseudomonas
Haemophilus
Klebsiella
Aerobacter
Escherichia

In vitro overlapping antibacterial action of Neosporin® Ointment (polymyxin B-bacitracin-neomycin).

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

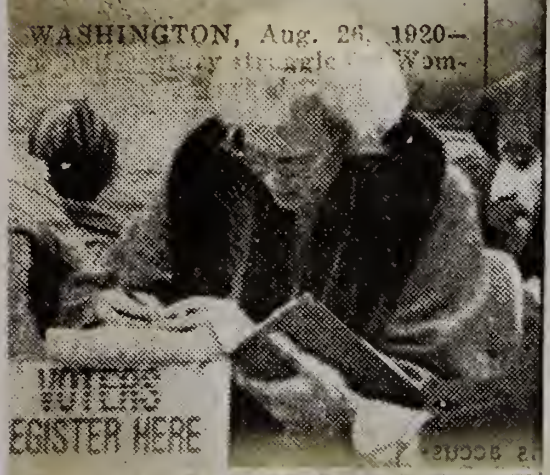
COLBY PROCLAIMS WOMAN SUFFRAGE

Signs Certificate of Ratification at His Home Without Women Witnesses.

MILITANTS VEXED AT PRIVACY.

Wanted Movies of Ceremony, But Both Factions Are

WASHINGTON, Aug. 26, 1920—



Social Security Bill Is Signed; Gives Pensions to Aged, Jobl

Roosevelt Approves Message Intended to Benefit 30,000 Persons When States Adopt Cooperating Laws–He Ca the Measure 'Cornerstone' of His Economic Program

WASHINGTON, Aug. 14, The Social Security Bill, pro a broad program of unemplo insurance and old age pen and counted upon to benefit 20,000,000 persons, became la day when it was signed by dent Roosevelt in the prese those chiefly responsible fo ting it through C s.

Mr. Roosevelt cal the me "the cor erstone st which is being me s comple ri to

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today 94 to 0 and sen

UL IGNE

TRUMAN CLOSES TED NATIONS CONFEREN ITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

SAN FRANCISCO, June 26, 1945—The United Nations Conference

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can be in history!"

Just before the plenary session the President accompanied the eight United States delegates to the auditorium of the Veterans'

the Draf Ends No



WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the Secretary of the Army that he foresees no need for further inductions I wish

PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST., N. W., WASHINGTON, D. C. 20005

Kefzol® I.M./I.V.
cefazolin sodium

Ampoules, equivalent to 500 mg., 1 Gm.,
and 10 Gm. of cefazolin



Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

700773

Experience With 222 Colonoscopic Polypectomies

William A. Webb, M.D., F.A.C.S.*
Linda McDaniel, R.N. and Brenda Browning, R.N.†

Endoscopic polypectomy has greatly changed the management of colon polyps. Herein is presented the management of 222 consecutive colonoscopic polypectomies. The term polyp as used in this paper is clinical and refers to any mass of tissue arising from the mucosal lining and protruding into the lumen of the colon. This includes both sessile and pedunculated lesions. All polyps included in this series were removed as definitive treatment for the polyp; no obvious carcinomas were included.

Methods

All patients for polypectomy are admitted one day prior to the procedure if they are not already in the hospital. A barium enema has previously been obtained on all patients.

The colon prep consists of 36-48 hours of clear liquids, magnesium citrate 10 ounces at 4 P.M., and two Dulcolax Tablets at 6 P.M. the day before polypectomy. Saline enemas until clear are given the night before and the morning of the procedure. Intravenous fluids are given to the older patients overnight to prevent dehydration. This is a vigorous prep, but there has not been a single unsatisfactory prep in over 500 colonoscopies. Oral antibiotics are not used unless the polyp is large or is suspicious of carcinoma, with the resulting likelihood that the patient will have to undergo a transabdominal procedure.

The polypectomy is carried out in an endoscopy room. The patient is pre-medicated with meperidine (Demerol) and promethazine (Phenergan) prior to arrival in the suite. Additional sedation is given as required in the form of intravenous diazepam (Valium) and meperidine.

*Gastro-intestinal Endoscopy Unit, Lee County Hospital, Auburn-Opelika, Alabama.
†G. I. Assistants.

Olympus colonscopes are used; and all procedures are done with the 111.5 cm $CFMB_2$, the 173.5 cm TCF, or the 186.5 cm LB_3. CO_2 is exchanged prior to each polypectomy for medicolegal reasons. We are not aware of an explosion in a well prepped colon and where total colonoscopy has been performed.

Technique will not be discussed. Total colonoscopy to the cecum is done on all patients if possible. Our success rate to the cecum is greater than 90%, with the single greatest deterrent to reaching the cecum being diverticular disease of the sigmoid colon with a stenotic lumen.

Pelvic adhesions secondary to previous surgery have not proved to be a significant problem. If one polyp is present, there is a 50% chance that a second polyp is also present;[1] and this is a strong indication for total colonscopy.

All polyps are removed if possible. The larger polyps are removed with a wire snare and an electrical current, much like that described by Shinya and Wolff.[2] Careful judgement must be exercised in trimming out large sessile lesions because malignancy[3,4] and complication rates are higher in this group. Our largest polyp was greater than four centimeters and had to be removed piecemeal, as the snare is only 25 mm in diameter.

Excresences or mamillations are removed with biopsy forceps. These are often seen in conjunction with the larger polyps and are usually not appreciated on barium enema due to their size. Seven polyps are the most removed at one time in this series. No polypectomy had to be abandoned because of the anatomical location in the colon and inability to reach it.

Once the polyp has been severed in the colon, a great effort is made to retrieve it for pathological examination. We failed to retrieve only one polyp in this series, for a success rate of greater than 99%. Spencer et al[5] report a failure rate of 16% and Shinya and Wolff[6] 7% in their series. Most of our polyps are retrieved with the polypectomy snare or by sucking the polyp against the end of the

Table 1. Age grouping of polyps

AGE (years)	
0 - 19	1 (6)
20 - 35	5
36 - 50	20
51 - 65	61
66 - 75	34
76 - 85	11
over 85	1 (87)
Total	133

Table 2. Size and Type of Polyps

	Pedunculated	Sessile	Total
0.4-0.9 cm	75	86	161
1.0-1.9 cm	27	5	32
2.0-2.9 cm	16	3	19
3.0-3.9 cm	7	2	9
over 4.0 cm	0	1	1
	125	97	222

endoscope. The polyp retriever has not proved very valuable in our hands.

Unless the polypectomy has been difficult, the patient is fed a regular diet that evening and is discharged home the next morning. He may return to work immediately. Follow-up on these patients consists of a barium enema and colonoscopy on alternating years, beginning with the barium enema one year after polypectomy. A patient with a previous polyp has a 40% chance of developing a subsequent polyp[7] and should be followed for life.

Case Material

From December 1975 to July 1977, 133 patients underwent colonoscopy for the removal of 222 polyps. There were 91 males and 42 females, ranging in age from 6 years to 87 years. An age breakdown is seen in Table 1 with the largest number falling in the 51-65 age group. This is in keeping with other reported series.[8]

Table II indicates polyp size and type. There were 125 pedunculated and 97 sessile polyps. 157 polyps were snared and 65 removed with the hot biopsy forceps. The majority of the polyps were about one centimeter in diameter. As mentioned previously, polyp size is directly related to incidence of carcinoma.

More specifically, a polyp less than 1.0 cm has a 0.2% chance of being malignant; a polyp 1.0 - 2.0 cm a 4.2% chance; and a polyp greater than 2.0 cm a 27% chance.[4] Morson quotes higher malignancy rates of 1.3%, 9.5%, and 46% respectively.[3] The overall incidence of carcinoma in polyps both in-situ and invasive is about 5%.[9] It is our policy to colonoscope all patients with polyps 0.5 cm or larger, provided they are in good general health.

Two minor bleeds occurred following removal of two large polyps (3.0 and 3.5 cm). One bled approximately 100 cc and the other about 300 cc. No transfusions were required, but the patients were kept in the hospital one additional day. No perforations have occurred to date, and thus a complication rate of 0.9% has been maintained. We feel that the very low complication rate is due to the consistency of one experienced person passing the colonoscope each time and a trained assistant closing the snare on each polypectomy.

Sugarbaker and Vineyard[10] report a 3% incidence of polypectomy complications requiring laparotomy, while Berci et al[11] removed 91 polyps with two bleeds, neither of which required transfusions. →

Her next attack of cystitis* may require

The Bactrim™ 3-system counterattack



*Due to susceptible organisms

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Bactrim™ DS Double Strength Tablets

ROCHE

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Please see reverse side for summary of product information.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets



Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets*, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets*, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension*, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Table III indicates the preponderance of polyps in the sigmoid colon, a statistic which agrees with other published reports.[4,12] It is interesting that the right colon and cecum contained 28 polyps or 12.2% in our series. This figure is higher than that of most other series, but is in keeping with reports by Blatt[13] who found 37% of polyps in this area of 466 colons examined at autopsy.

It is our feeling that as the right colon and cecum are more easily reached by experienced endoscopists, the percentage of polyps found in this area will prove to be higher.

The majority (194) of polyps were adenomas (Table IV). Of the remaining 28 polyps, there were 9 villous, 11 mixed type, and 8 carcinomas (3.6%). Of the eight carcinomas, four were in-situ and four invasive. Invasion is defined as penetration of the muscularis mucosa. Atypia was not considered in-situ.

The size of the in-situ polyps was 0.8 cm, 1.5 cm, 2.0 cm, and 2.5 cm. The invasive were 1.0 cm, 1.2 cm, 2.5 cm, and 3.0 cm in size. All were pedunculated except the 3.0 cm sessile polyp. The group with in-situ lesions needed no further treatment except close follow-up; but the invasive group all underwent colon resections and regional lymphadenectomy.

A review of the literature indicates widely varying statistics on lymph node metastasis in polyps with invasive carcinoma. Hedberg reported four out of nine patients with positive nodes (44%),[1] while Okike et al[14] from the Mayo Clinic reported no positive nodes in 27 patients undergoing colon resection and regional lymphadenectomy for invasive carcinoma in polyps.

We had no positive nodes in our group. Therefore, while the exact incidence of lymph node metastasis in this seemingly very favorable group is not known, it does occur and patients should undergo colon resection and lymphadenectomy if their general health permits it.

Discussion

Polypectomy via the colonoscope has renewed interest in the problem of the polyp-cancer relationship. Most observers now feel that a polyp can definitely undergo malignant changes; and Morson[3], Muto[15], and Kozuka[16,17] have all recently published excellent papers supporting this theory.

→

Table 3. Anatomic Location

Sigmoid Colon	112
Left Colon	52
Transverse Colon	30
Right Colon and cecum	28
	222

Table 4. Pathology

Adenomatous	194
Villous	9
Mixed	11
Carcinoma - in-situ	4
- invasive	4

It is interesting that we are not seeing the very small carcinomas (0.5 cm - 1.0 cm) that should be evident through the colonoscope if they do arise de novo, as has been postulated.

Endoscopic polypectomy has revolutionized the treatment of the colon polyp. Surgical removal carries a 14% morbidity and a 6% mortality rate,[18], as opposed to a complication rate of less than 1% for endoscopic removal.[5,6,10,11] The cost factor is extremely important also in this time of rising medical expenses.

Knutson[19] has written an informative paper on cost-benefit factors, showing the cost of endoscopic polypectomy to be only about one-third that of surgical polypectomy. The single largest factor is time lost from work. The transabdominal approach requires six to eight weeks of convalescence even if no complications arise, while the endoscopic polypectomy patient may return to work within one to three days.

The preventive aspect of endoscopic polypectomy is one of the most interesting and important. Gilbertson's study[20], where 85% of predicted rectal and sigmoid cancers were prevented by systematic removal of polyps with the rigid procto-sigmoidoscope, is encouraging and gives hope of preventing colon carcinomas and improving five-year survival rates by detecting earlier lesions.

The endoscopic polypectomy is apparently more acceptable to both patients and their referring physicians. In the year 1974 only 12 surgical polypectomies were performed on a very active surgical service in our hospital. The era of the transabdominal approach to the polyp, except with the larger ones, appears to be coming to an end.

Summary

Experience with 222 consecutive colonoscopic polypectomies is reviewed. Patient management; polyp type, size, and location; and cancer incidence is presented. Complication rates for both endoscopic and transabdominal polypectomies are reviewed, as are relative cost factors. ●

References

1. Coller, John A., Corman, Marvin L., Veidenheimer, Malcolm C.: Colonic Polypoid Disease: Need for Total Colonscopy. Am. J. of Surgery, Vol. 131: 490-494, 1973.
2. Shinya, H., Wolff, W.I.: Colonoscopic Polypectomy: Technique and Safety. Hospital Practice, 71-75, 1975.
3. Morson, B.: The Polyp-Cancer Sequence in the Large Bowel. Proc. Roy. Soc. Med., Vol. 67: 451-457, 1974.
4. Welch, C. E., Hedberg, S. E.: Polypoid Lesions of the Gastrointestinal Tract. Second Ed., 1975, W. B. Saunders Co.
5. Spencer, R. J., Coates, H. L., and Anderson, M. J.: Colonoscopic Polypectomies. Mayo Clinic Proc. Vol. 49: 40, 1974.
6. Wolff, W. I., Shinya, H.: Modern Endoscopy of the Alimentary Tract. Curr. Probl. Surg., Vol. 30: Jan. 1974.
7. Rider, J. A., Kirsner, J. B., Moeller, H. C., and Palmer, W. L.: Polyps of the Colon and Rectum - A Four Year to Nine Year Follow-Up Study of 537 Patients. J.A.M.A., Vol. 170: 638, 1959.
8. Enterline, H. T., Evans, G. W., Mercudo-Lugo R., et al: Malignant Potential of Adenomas of Colon and Rectum. J.A.M.A., Vol. 179: 322, 1962.
9. Morson, B. C., Bussey, H.J.R.: Predisposing Causes of Intestinal Cancer. Curr. Probl. Surg., Feb. 1970.
10. Sugerbaker, P. H. and Vineyard, G. C.: Snare Polypectomy with the Fiberoptic Colonoscope. Surg. Gynecol. Obstet., Vol. 138: 581, 1974.
11. Berci, G., Panish, J., Morgenstern, L.: Diagnostic Colonoscopy and Colonscopic Polypectomy. Arch. Surg. Vol. 106: 818, 1973.
12. Deddish, M. B., Hertz, R. E.: Colotomy and Colonoscopy in the Management of Neoplasms of the Colon. Dis. Colon Rectum, Vol. 2: 133, 1959.
13. Blatt, L. J.: Polyps of the Colon and Rectum: Incidence and Distribution. Dis. Colon Rectum, Vol. 4: 277, 1961.
14. Okike, N., Weiland, Louis H., Anderson, Markham J., Adson, Martin A.: Stromal Invasion of Cancer in Pedunculated Adenomatous Colorectal Polyps. Arch. Surg., Vol. 112: 527, 1977.
15. Muto, T., Ishikawa, K., Kino, I., Nakamura, K., Sugano, H., Bussey, H.J.R., Morson, B. C.: Comparative Histologic Study of Adenomas of the Large Intestine in Japan and England, with Special Reference to Malignant Potential. Dis. Colon Rectum, Vol. 20: 11, 1977.
16. Kozuka, Sadao: Premalignancy of the Mucosal Polyp in the Large Intestine. Dis. Colon Rectum, Vol. 18: 483, 1975.
17. Kozuka, S., Taki, T., Kubota, K., Yokoyama, Y.: Simultaneous Transition of Multiple Polyps into Carcinoma in the Large Intestine. Dis. Colon Rectum, Vol. 19: 655, 1976.
18. Norfleet, R. G.: The Importance of Small Polyps. 4th Annual Endoscopy Conference, Milwaukee, Wis. 1976.
19. Knutson, C. O., Schrock, L. G., Polk, H. C.: Polypoid Lesions of the Proximal Colon: Comparison of Experiences with Removal at Laparatomy and by Colonoscopy. Ann. Surg., Vol. 179: 657, 1974.
20. Gilbertson, V. A.: Proctosigmoidoscopy and Polypectomy in Reducing the Incidence of Rectal Cancer. Cancer, Vol. 34: 936, 1974.

Ocular Presentations In The Emergency Department

S. Hutson Hay, M.D.*

ABSTRACT

Three hundred and five consecutive cases of ocular emergencies which presented to the Medical College of Virginia Emergency Department were analyzed. This study revealed that 80% of the patients seen were 40 years of age or younger and 70% had suffered some form of traumatic injury. The presenting disorder was of a significant degree in 58%. Evaluation of the patient in the Emergency Department failed to include a test of visual acuity in 53% of the cases. A surprisingly large third-party involvement in ophthalmic care was noted.

Between 1950 and 1960 a new concept of emergency medical care began to develop across the United States. Many factors were involved in the development of this concept and its subsequent embodiment.

The medically significant factors were the advantages to be gained in the preservation of physiologic function by immediate care, and in the usage of expensive and complex equipment, both in diagnostic and therapeutic modalities.

In response to societal pressures exerted on the medical care delivery system, a variety of emergency care models have developed. These models, while divergent, have certain common characteristics which are:

a. Rapid growth.

b. Twenty-four hour a day availability for either emergency or convenient care.

c. Increased reliance on the emergentologist by the public and fellow physicians in the community.

d. An increasing expectation from all involved, including third parties, for adequate and comprehensive medical care.

Emergency medicine has experienced an explosive growth of 380% increase in utilization within the last 20 years. Perspective is gained by comparison over the same period of a 14% increase in the number of hospitals, a 56% increase in the number of hospital beds, and a 60% increase in hospital admissions.

In step with this growth has been the increasing number of physicians who have chosen to specialize in the field of emergency medicine. This is reflected in the creation and rapid growth of the American College of Emergency Physicians in the six preceding years.

12% Of All Visits

In 1969, statistics indicated that nearly 12% of all patient visits seen by ophthalmologists occurred in either a clinic or emergency department setting. These figures are corroborated in part by the analysis of the etiology in visual impairment found in a general population.

This study by the National Center for Health Statistics was compiled over a period from July 1959 through June 1969. It indicated that 16.3% of all visual impairments occurred from injury, and 16.1% were severe enough to affect major activities.

A definite change is occurring in the delivery of ophthalmic care to the community. Increasing numbers of individuals with ocular disease, both major and minor, can be expected to present to emergency medical facilities for primary care.

It is at this point that a marked improvement in the management of severely diseased eyes or primary care for less affected eyes can be made. This dramatic alteration in ophthalmological care stimulated my interest in the experience that I had at Medical College of Virginia Hospital.

The Medical College at Virginia Hospital Emergency Department's records were reviewed for a

TABLE I

Department Of Ophthalmology
Medical College Of Virginia

Age Distribution of E.R. Visits—305 Cases

AGE	CASES	PERCENT	
0- - 10	40	13.1	
11 - 20	80	26.2	> 39.3
21 - 30	75	24.5	
31 - 40	52	17	> 41.5
41 - 50	24	8	
51 - 60	32	7.5	
61 - 70	7	2	
70 +	4	1	
	305	100	

TABLE 2

Emergency Room Visits—305 Cases

SEX DISTRIBUTION (PERCENT)

Male	Female
184 (60.3)	121 (39.7)

OCULAR DISTRIBUTION (PERCENT)

O.D.	O.S.	O.U.	N.A.
126(41.3)	130(42.6)	3(10.7)	16(5.5)

RACE

White	Black
99 (32.4)	206 (67.6)

*Eye physician and surgeon, Huntsville, Alabama.

TABLE 3

Aetiological Factors In E.R. Visits—305 Cases

Disorder	Cases	Percent
Infections	41	13.4
Traumatic	217	71.1
Spontaneous	27	8.8
Iatrogenic	9	2.9
Undiagnosed	11	3.6
	305	100

TABLE 4

Ocular Involvement—E.R. Visits—305 Cases

Area Of Involvement	Cases	Percent
Periorbital	100	32.4
Corneal	84	27.5
Conjunctival	57	18.6
Internal	31	10.1
Combined	10	3.2
	305	100

TABLE 5

Disposition Of Patient—E.R. Visit—305 Cases

	Cases	Percent
Treated – No follow-up	115	37.7
Follow-up Therapy	176	58
Hospitalized	14	4.5
	305	100

TABLE 6

Initial Visual Acuity—E.R. Visit—305 Cases

Best V.A.	Cases	Percent
20/20 – 20/40	119	39
20/50 – 20/200	19	6.2
Less Than 20/200	6	1.9
Unknown	161	53.1
	305	100

TABLE 7

Insurance Coverage—E.R. Visit—305 Cases

	Cases	Percent
Patients Covered	206	67.3
Patients Not Covered	99	32.7
	305	100

period of three months, beginning in January 1974. A total of 305 cases was studied.

Table I demonstrated the age distribution of these patients. An interesting finding was the infrequency of the middle aged to older individuals; less than 20% were 41 years of age or older. A significant disabling injury to the average patient would affect him through the great majority of his productive years.

Table II demonstrates sex, race and ocular involvement. Sixty percent of the cases were males.

Table III reflects the vast predominance of traumatic etiological factors.

The site of ocular involvement is noted in Table IV.

Fifty-eight percent of the patients were adjudged serious enough to warrant follow-up ophthalmic examination. Hospitalization and/or surgery was required in 4.5 percent (Table V).

Table VI indicates presenting visual acuity recorded by the initial examining physician.

Table VII demonstrates the large involvement in ocular care by third parties.

The Medical College of Virginia is a large metropolitan teaching institution staffed by interns, second and third-year resident surgery physicians, with consultant capacities in all fields. Visual acuity was taken by the initial examining physicians in 46.9% of the cases. Visual acuity was not recorded at the time of the first visit in 53.1%. This elementary deficiency in adequately evaluating ophthalmic presentations reflects a serious omission.

Continuing Education Needed

Concern is expressed for the need of continued education in the requirements of a satisfactory ophthalmic evaluation. They will increasingly be felt in the Emergency Department and in particular by those who have chosen such primary care positions.

Ophthalmologists must share responsibility for dissemination of this knowledge, and provide suitable specialty coverage if the full benefits of this developing concept of emergency medical care are to be achieved.

Summary

A fundamental change in mode of health care delivery in the United States is traced briefly, and the function of emergency department systems is discussed with particular emphasis on ophthalmology.

Over a three-month period, 305 cases of ocular presentations were reviewed and presented statistically from the Medical College of Virginia Emergency Department.

Recommendations for improved emergency care for those suffering with ocular disease are made. Particular emphasis must be given to the initial study of the visual acuity of all such patients. ●

Bibliography

1. Gibson G.: EMS: A Facet of Ambulatory Care, Hospitals 47:59-66 May 16, 1973.
2. Haeck, W. T.: The Emergence of Emergency Physicians. J. Med. Assoc. State Ala. 42:473-9 January 1973.
3. Physicians Visits: Volume and Interval Since Last Visit: United States 1969 Washington, D. C.: Department of Health, Education, Welfare, 1972.
4. Impairment Due to Injury by Class and Type of Accident: United States July 1959 - June 1961: National Center for Health Statistics Series No. 10, Number 6.

Spondylolysis Of The L-2 Vertebra In A Female Gymnast

A Case Report

Nicholas A. Knight, M.D.,* R. Joe Burleson, M.D.,† and John A. Higginbotham, M.D.‡

Spondylolysis is a defect in the pars interarticularis either unilateral or bilateral without any anterior displacement of the vertebra. When there are bilateral defects in the pars interarticulares with anterior displacement of the vertebra and superincumbent spine on the lower vertebra, spondylolisthesis occurs.[1] Most often the defect occurs at the fifth lumbar vertebra. Rarely L-4 is involved and even more rarely other lumbar and cervical vertebra are involved. A case report is presented of a University of Alabama female gymnast with bilateral spondylolysis at the L-2 level. A search of the literature revealed only four or five other cases with pars defects at this level.

Case History

S. W. is a 20-year old white female who is 4'11" tall and weighs 97 lbs. She began taking dance lessons and gymnastics at the age of 8 mainly during the summer months. At the age of 14, she began to train in gymnastics exclusively. She practiced at least three hours a day, five days a week.

When S. W. was 18, she entered the University of Alabama on a gymnastics scholarship. During the year, she experienced a severe attack of low back pain after a practice session. The pain was sharp, cramping, and bilateral but without radiation into the buttocks or down either leg. She was treated with bed rest, analgesics, muscle relaxants, and found comfort in the fetal position with knees flexed. X-rays of the lumbosacral spine were obtained at this time and were read as negative by a radiologist. (See fig. 1.) Her pain gradually abated, and she resumed practice.

At age 19, she again experienced back pain after a practice session, but she only limited her practice



Fig. 1: Lateral film March, 1976 showing early radiolucent change at L-2 neural arch unrecognized at that time.

sessions and avoided certain exercises such as back walk-overs because these aggravated her back pain.

At age 20, she again had an acute onset of low back pain of the same quality as before but more severe in intensity. X-rays were obtained and revealed suspected bilateral pars interarticularis defects at the L-2 level as well as a spina bifida occulta at S-1 (See fig. 2.) Oblique views were obtained which were confirmatory of the bilateral spondylolysis (See fig. 3.) Physical examination at this time revealed only mild pain on hyperextension of the back. There were no neurological or sensory deficits.

On reviewing the x-rays from 1½ years earlier a definite pars defect was seen at the L-2 level but not nearly as evident as the present one. She was again treated with bed rest and restriction of activity. The pain lessened but continues to recur at the practice sessions especially during hyperextension maneuvers. At this point, both the patient and her physicians feel almost certain that she will have to quit gymnastics because of the chronic pain despite the fact that she has exceptional talent and drive to continue.

Discussion

The cause of spondylolysis is unknown but repeated minor injuries, a severe single injury, and

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Fig. 2: Lateral film Sept. 1977 showing obvious neural arch defect at L-2.

a stress fracture associated with assuming the upright position in early childhood have all been suggested as possible etiologies.[1] Wiltse feels that most cases of spondylolysis are due to fatique fractures in the sense that they are the result of repeated trauma and stress rather than of one acute traumatic episode. We feel this was true in our case.

Stress fractures of the pars interarticulares differ from other stress fractures in that they tend to occur at an earlier age but rarely before the age of 6 or 7. There tends to be a hereditary predisposition, especially where multiple vertebra are involved. This seems to indicate a tendency toward developmental dysplasia of the vertebra. Also, the periosteal callus formation so often seen in other fatique fractures is seen only occasionally with bilateral neural arch defects. Defects in the pars interarticulares tend to persist whereas fatique fractures in other bones almost always heal.[2]

The incidence of spondylolysis in the white population is quoted as about 5.8% while blacks are affected only one-third as often.[2] In the Alaskan Eskimos, as many as 60% of the population have defects in the pars.[3]

Males are affected more often than females, but this may be due to the fact that males are more physically active in athletics than females, especially in contact sports. Certain groups of females have a higher incidence of pars defects, particularly those involved in ballet and gymnastics. In a study involving 100 white female gymnasts, the incidence of pars interaticularis defects was 11% compared to 2.8% incidence in the general population of white females.[4]

Spondylolysis may not always have symptoms associated with it, but in the previously mentioned study of female gymnasts, 54.5% of these had episodes of low back pain significant enough to interfere with training.[4] The back pain associated with spondylolysis is described as dull, aching, and cramping. It was usually noted to be aggravated by certain activities especially hyperextension maneuvers (back walk-overs). Occasionally unilateral sciatica may develop. In our case, dull aching back pain which was increased by gymnastic exercises actually caused the patient to seek medical attention.

Diagnosis usually cannot be made on the routine AP and lateral films so left and right oblique films should be obtained if one is considering spondylolysis as a diagnosis. However, the most evident change on x-rays of this patient was on the lateral view.

If a defect exists on initial x-rays, one should try to determine whether it is an acute injury or not. The vast majority have probably been present since age 5 or 6, and this should be expected if there is rounding and resorption of bone at the site of the defect. "Activity" on bone scan is of help in determining acuteness of a lesion.

In a study[5] investigating unilateral reactive sclerosis of a pedicle or lamina of a lumbar vertebra, a contralateral spondylolysis was also seen within the same vertebra. This may help in ruling out the more serious causes of reactive sclerosis such as osteoid-osteoma. If reactive sclerosis is seen on routine x-rays, oblique views should be obtained to search for spondylolysis as the etiology of the sclerosis.

If initial x-rays are negative, then follow-up x-rays at three and six week intervals should be performed until pain disappears. Healing of the defect can occur without any treatment but more often a permanent pseudarthrosis develops. The principal potential problem with spondylolysis is anterior displacement of the vertebral body on the lower vertebra with resultant spondylolisthesis. This occurs in approximately 50% of the cases of bilateral spondylolysis.[2]

Treatment of spondylolysis in which back pain occurs consists of discontinuation of physical activity until pain subsides. The patient may then safely return to his or her athletic activity. However, if pain recurs, then permanent cessation of the sport probably is the preferred course; or at least changing to a less vigorous sport.[6]

Athletes with asymptomatic spondylolisthesis who are highly motivated and above average in their performance might be allowed to continue to play. However, if they are average or below average players, they are usually encouraged to seek other less vigorous and non-contact sports.

It should be pointed out, though, that there is no good evidence that athletes with spondylolisthesis are any more susceptible to back injuries than those without. If spondylolisthesis results in chronic low back pain, spinal fusion is generally indicated.

Summary

A case of bilateral spondylolysis of L-2 was found in a University of Alabama scholarship gymnast and has been presented. The entire female gymnastic team consisting of eight members was also surveyed with no other defects found.

This case should remind us that low back pain in young men and women should be thoroughly investigated, especially if they are athletic individuals. This should include a thorough history and physical examination and x-rays of the lumbar spine with oblique views. A diligent search for spondylytic defects can be useful from a prognostic standpoint in giving the patiient an idea of what potential problems may develop.

Pain continues to be the main limiting factor as to whether a patient will continue to participate in a sport since no evidence presently exists to support the theory that cessation of the sport will prevent the development of the more serious problem of spondylolisthesis. ●

References

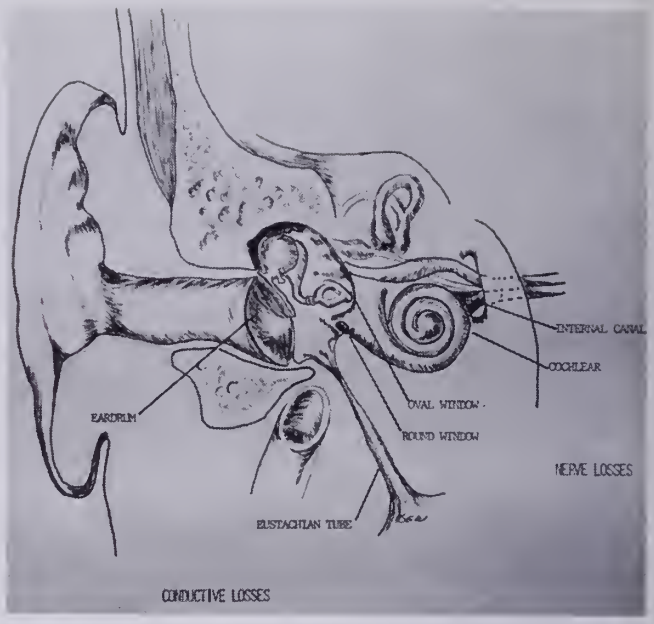
1. Crenshaw, A.H.: Campbell's Operative Orthopedics. 5th edition; 2008-2015, 1971.
2. Wiltse, L. L.; Widel, E. H.; Jackson, D. W.: Fatique Fracture: The Basic Lesion in Isthmic Spondylolisthesis. J. Bone and Joint Surgery 57-A/1 17-22, Jan. 1975.
3. Stewart, T. D.: The Age Incidence of Neural Arch Defects in Alaskan Natives, Considered from a standpoint of Etiology. J. Bone and Joint Surgery 35-A 937-950, Oct. 1953.
4. Jackson, D.W.; Wiltse, L.L.; Circincione, R.J.: Spondylolysis in the Female Gymnast. Clinical Orthopedics and Related Research No. 117 68-73, June 1976.
5. Sharman, F. C.; Wilkinson, R. H.; Hall, S.E.: Reactive Sclerosis of a Pedicle and Spondylolysis in the Lumbar Spine. J. Bone and Joint Surgery 59-A/1 59-54, Jan. 1977.
6. Jackson, D. W.; Wiltse, L.L.: Low Back Pain in Young Athletes. The Physician and Sportsmedicine 53-60, Nov. 1974.



Fig. 3: Right oblique film showing same defect at L-2 but not as distinctly as the lateral view.

Scuba Diving And Its Problems

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Scuba diving is fast becoming a popular pastime in our area and I find this sport brings a variety of complaints from patients. Physicians often see divers whose chief problem is ear pain, loss of hearing, or difficulty clearing the ear and sinus trouble. Many cases of severe sensorineural hearing loss are being reported. The following should help you explain to, treat and advise these patients.

The ear is divided into three parts: an *external* ear, a *middle* ear, and an *inner* ear. Each part performs an important function in the process of hearing. Sound waves pass through the canal of the external ear and vibrate the ear drum which separates the external ear from the middle ear. Three small bones in the middle ear transmit the energy of the sound vibration to nerve endings in the inner ear. The nerve of hearing then carries the sound impulses to the brain where they are interpreted. Notice the "trouble spots" of the ear that may occur with severe barometric changes.

1. Eustachian tube and tympanic membrane-conductive hearing loss.

2. Membrane tears in oval window, round window, internal auditory canal ?cochlear aqueduct, ?cochlear-sensorineural hearing loss (nerve hearing loss).

"Pearls For Scuba Divers"

Barometric Trauma

Barometric trauma to the ears usually occurs within the first 6 to 10 feet and is greatest at the first 10 to 16 feet. If the diver cannot clear his ears during the first 10 feet of descent, he should immediately return to the surface and not resume diving for a period.

Clearing the Ears

Never use force to clear the ears. Be gentle. The harder you blow trying to force the ears open, the more irritation and swelling results, especially in the eustachian tube. To clear the ears, always try to inflate gently — use chewing, yawning motions, as well as gently holding the nose in inflating. If possible, hang onto the anchor chain until the ears clear, or come up one or two feet.

Medications for Nasal and Ear Congestion

The use of antihistamines is to be avoided due to its side effects of drowsiness. Sudafed, 30 Mg., may be purchased without a prescription. One or two of these every four hours will usually dry the nose and help clear the ears.

Nasal Congestion With Hay Fever

Hay fever tends to be a result of the amount of pollen in the air. When practicing in the pool and the pollen count is high, the pool chlorine will cause more irritation. However, breathing from the tank means breathing air free of pollen and dust. Also, the air is dry, so the hay fever individual may feel better on the tank than he does on the land.

Nasal Congestion Without Hay Fever, Etc.

Some people tend to force breathe through their nose with all the strength they have available to them. And yet, the nose is just as delicate as the eye and just as excessive rubbing of the eye will case the eye to swell, so will excessive blowing of the nose cause the nasal membranes to swell. Blow the nose gently, with both sides open. This prevents ear problems.

Chronic Ear

Patients with chronic ear trouble should find another hobby. Such an individual tends to have scarred tympanic membranes and a mild conductive hearing loss. Diving will only aggravate their condition. I also feel that patients who have had major ear surgery (tympanoplasty, stapedectomy) should not dive. To continue diving, the patient risks re-perforation and re-infection. Likewise, people with Meniere's and other forms of vertigo should be restricted.

Rupture of the Ear Drum

Sudden pain, blood in the ear canal and hearing loss are indications of a ruptured or perforated eardrum. The ear should heal satisfactorily if the following rules are observed:

1. Don't go back into the water.
2. Don't put any type of ear drops whatsoever into the ear canal.
3. See your doctor for treatment. The treatment usually consists of cleaning the ear of clots or debris. If flaps of torn tympanic membrane are extending into the ear then these should be reapproximated with an instrument and a paper patch applied to the surface of the intact membrane. Oral antibiotics are used prophylactically.

Hearing Loss After Diving

Using too much pressure in cleaning the ear causes a hematoma or a "black eye" of the eardrum. If inflating the ear doesn't improve the hearing, this usually means that the trouble is in the ear drum proper; thus, the eardrum is swollen and fails to move well. Treatment consists of not blowing the nose or inflating the ears. Time will cure the problem.

Ear Plugs

Ear plugs should not be used during dives. An external ear squeeze occurs when the external auditory meatus is obstructed by a plug, cerumen or a tight hood. A negative pressure occurs in the external auditory canal as the diver descends. The ear drum will be drawn laterally, producing pain that will not be improved by inflation of the tympanic cavity.

Swimmer's Ear and Cleanliness

Some divers have the idea that "cleaning" the ears prevents external otitis. Unfortunately, this is wrong. Scrubbing with soap and water causes the natural oils of the ear canal to disappear and be replaced by hard, brittle skin which itches. To prevent swimmer's ear:

1. Never wash ears with soap and water or use a Q-tip inside the canal.
2. Do put baby oil into the ear canal before going into the water. This prevents the water from washing out the natural oils. Whenever the ear itches, this means that the ear canal is either inflamed or too dry.

Temperomandibular Joint Pain

Mandibular joint pathology is a very common cause of ear pain. A beginning diver may be likely to grit or grind his teeth on his mouthpiece and cause a spasm of the Pterygoid muscle. A spasm of the Tensor Tympani may result and produce the sensation of obstruction of the ear.

Using the Hood Properly

The purpose of the hood is to keep the head warm. If, during the dive, you enter a thermocline, the hood protects the wearer from the effect of cold water on his ear. If the diver gets cold water in contact with his ear drum, it will cause serious loss of equilibrium (ice water caloric). Thus, having a hole in the hood can lead to serious problems. The advantage of the hole in the hood is that it prevents build-up of pressure against the outer ear but this is really of little consequence. Just lifting the hood edges and allowing water to enter the external ear canal will help.

Vertigo

In addition to the most likely causes of vertigo, with divers, an external cause should be considered. Two small wet suits zipped up too tight, hoods fitted too snugly around the neck and straps applying pressure on the carotid bifurcation may cause sensitivity of the carotid sinus.

Epilepsy

Epileptics run a major risk and may not dive.

Asthma

Diving removes a large amount of water from the body. There is sweating, hyperventilation, etc. Snorkel breathing is drying to the lungs because the nose is bypassed. The function of nasal breathing is to warm and moisten the air on its way to the lungs. I recommend drinking two to three eight ounce glasses of water before each dive. This will tend to warm the lungs and thin out secretions and allow three or four dives.

Preparation for Diving Program

Set up exercise to include some running, push-ups, swimming with weights and pulling yourself out of the pool.

Smoking

Smoking considerably reduces tank time. ●

Health Education For Senior Citizens

Elizabeth Price, M.D.*

Recently, increasing stress has been placed upon the partnership between physicians and patient in overcoming disability and reinforcing health.

This point of view lies behind the "Activated Patient" concept which Dr. Keith Sehnert has popularized. All over the country, educational activities are being developed to help individuals better to care for themselves.

Concern about people's knowledge about health matters led to a public course, "A Healthy You," offered at the Huntsville-Madison County Senior Citizens' Center in the Winter of 1977 as part of the adult education program, "New Adventures in Learning."

In view of the relevance of the topic, the eight-week course was offered free, but the class was limited to 30 students.

The widespread interest in courses of this type prompts this brief report of the material covered.

The stage was set in the first session entitled "Responsibility for Health." Emphasis was placed upon person responsibility for self-care.

Proceeding from this base, the group discussed the ranges of normalcy in such aspects as temperature and pulse rate. Stress was placed upon the fact that normalcy is a range, not a point. The individual needs to be familiar with his own norms to ascertain when conditions are abnormal.

From here, discussion occurred with regard to basic human needs. Life styles also were explored, as part of the philosophy of personal responsibility for health. Tensions were discussed and some of the physiological concomitants.

Types Of Prevention

Different types of prevention were explored at another session. These ranged from primary prevention, such as accident prevention or a nutritious diet, to secondary prevention, with heightened sensitivity to potential problems through, for instance, breast self-examination or awareness of impending emotional disturbance.

The group was keenly interested in a canvass of community resources that could be helpful to deal with health needs. Gradually, there came the realization that there were greater resources than came to mind in the beginning.

During the course, two homework assignments were given. One was to find out about a community agency. The other was to inspect one's own medicine cabinet and discard unidentified medicines or those more than two-years-old.

Emergencies were discussed at length, since these constitute a worry. The class explored the observations needed to ascertain the degree of urgency of an emergency. In addition to presentation of the important observations required in an emergency, the class learned some of the ways these incidents may be dealt with.

Class members were keenly interested in developing their own personal health records. Realizing that these are difficult to compile on the spur of the moment when one feels ill, class members eagerly sought help in preparing a comprehensive personal medical history which would be available when needed.

Another subject which aroused much interest in the group concerned the most effective way to make use of one's meetings with the doctor. In this discussion, as earlier, stress was placed upon the individual's responsibility for his or her own health status.

Learning To Cope

The final topic pertained to geriatric matters and methods of "coping."

Thirty older individuals took the course. Interest was maintained at a high level. Partly as an outgrowth of interests expressed by the students, later courses were held in relaxation techniques, cardio-pulmonary resuscitation, and weight control.

In conclusion, the experience with the Huntsville Senior Center course in "A Healthy You" suggests that people are eager to learn more about health care and can be helped to use the medical care system more effectively. ●

*Associate Professor of Community Medicine, The University of Alabama in Huntsville, School of Primary Medical Care.

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On five different occasions the AMA House of Delegates has passed resolutions commending the objectives of AAMA, endorsing its functions, and urging every physician to encourage medical assistants to join the association in order to benefit from its educational programs.

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JOHN M. PACKARD, M.D.*

Down The Wrong Way...

One of the most frightening experiences one can have is to choke on a piece of food. Not many of us die from it—less than 3,000 deaths are reported annually from upper airway obstruction. But to a certain extent, it is preventable and if recognized by a trained observer, it is almost always treatable with complete recovery.

Cause and Prevention

In adults, obstruction usually occurs during eating. It is most often caused by aspiration of a large hunk of poorly chewed meat, and associated with elevated blood alcohol and dentures. Because this emergency has often been mistaken for a heart attack, it has been termed a "cafe coronary."

The following measures are suggested to prevent such airway obstruction: (1) Cut food into small pieces and chew thoroughly; (2) avoid excess alcohol before and during meals; (3) avoid laughing and talking while chewing and swallowing.

In children, a wide variety of objects have caused obstruction in addition to food. Preventive measures include restricting children from walking, running or playing with food or foreign objects in their mouths, and keeping marbles, beads and other small objects out of reach of infants and small children.

An unconscious person may obstruct the upper airway if the tongue falls back into the pharynx. Regurgitation of stomach contents into the pharynx may occur in alcoholic stupor or during cardiac arrest and resuscitative efforts. Head and facial injuries may result in blood clots obstructing the airway. The head-tilt or jaw-lift methods of opening the airway relieves the obstruction if the tongue is the sole cause. Vomitus or blood clots may be removed by rolling the patient onto his side, away from the rescuer, and using the fingers or suction to clear the airway.

*John M. Packard, M.D., is Director of Medical Education, Baptist Medical Centers, Birmingham; Clinical Professor of Medicine at the University of Alabama School of Medicine; and Chairman of the Emergency Cardiac Care/Cardiopulmonary Resuscitation Committee of the American Heart Association, Alabama Affiliate.

Recognition

Foreign bodies may cause either partial or complete airway obstruction. If incomplete, the victim may demonstrate good or poor air exchange. With good air exchange, the victim can cough vigorously and can speak, although he may wheeze between coughs. He is best left alone.

Partial airway obstruction with poor air exchange is diagnosed by a weak, ineffective cough, crowing sounds on inspiration, use of secondary muscles of respiration and eventually by cyanosis and collapse. Persons with poor air exchange should be treated as if complete obstruction were present.

With complete obstruction, the victim is unable to cough, breathe or speak. He may use the "universal distress signal"—clutching his neck. ●

TREATMENT

I. Victim Conscious:

A. Establish airway obstruction. Ask victim: "Can you speak?" Look, listen and feel for respiration.
B. Back Blows.
   1. Position yourself at side and slightly behind victim.
   2. Deliver four sharp blows to upper spine between scapulae, using heel of hand.
   3. Use other hand on front of chest for support.
   4. If possible, have victim lean over with head below chest to make use of the effect of gravity.
   5. If unsuccessful, proceed to manual thrusts.
C. Manual Thrusts—Manual thrusts are a series of four quick thrusts to the upper abdomen (abdominal thrusts) or to the lower sternum (chest thrusts).
   1. Abdominal thrusts.
      a. If victim is standing or sitting, stand behind him and wrap arma around his waist.
      b. Grasp one fist with other hand and place thumb side of fist in epigastrium.
      c. Give four quick upward thrusts into the abdomen.
   2. Chest thrusts. As an alternative to the abdominal thrust, the fist may be positioned over the lower 1/3 of the sternum. This is especially useful if the victim's abdomen is so obese that the rescuer has trouble joining his hand in front, or if sudden pressure to the abdomen may cause complications, as in advanced pregnancy or after a large meal when regurgitation may ensue.
      a. Stand behind victim and wrap arms around chest and below breasts, if victim is a woman.
      b. Grasp one fist with other hand and place thumb side over lower sternum (same position as for CPR).
      c. Give four quick backward thrusts.

   Repeat the above sequence of four back blows and four manual thrusts until they are effective or the victim becomes unconscious. Efforts are considered effective if any one of the following occurs: (1) victim resumes spontaneous respiration; (2) he begins to regain normal color of skin, or (3) foreign body is expelled.

II. Victim Unconscious:

A. Establish unresponsiveness by shaking and shouting; call for help.
B. Open airway by head-tilt and establish breathlessness by looking, listening and feeling.
C. Attempt to ventilate.
D. Reposition head and attempt to ventilate again.
E. Roll victim toward you, using thigh for support, and give four forceful and rapid blows to upper spine between scapulae with heel of hand.
F. Place victim on back and apply four manual thrusts:
   1. Abdominal thrusts may be delivered by straddling victim or by kneeling alongside. Heel of one hand is placed in epigastrium with other hand on top, and four quick upward thrusts are delivered.
   2. Chest thrusts may be used if victim is very obese, in advanced pregnancy, or known to have eaten recently. Rescuer kneels beside victim and places hands in same position as that for applying closed chest compression. Four quick downward thrusts are delivered.
G. Check for foreign body in mouth by rolling victim away from you, or turning head to one side and opening mouth with jaw lift or crossed finger techniques. Sweep finger of other hand along cheek and into pharynx. A dislodged foreign body may now be manually accessible if it has not been expelled.
H. Attempt to ventilate. If still obstructed, continue back blows, manual thrusts and finger probes in same sequence.
I. When and if obstruction is relieved, check carotid pulse and give CPR if indicated.
J. If no relief, perform cricothyreotomy or tracheostomy, if qualified. It is worth persisting for 3-4 minutes before resorting to surgery, because as unconsciousness progresses, the muscles tend to relax. Thus, measures originally ineffective may result in relief of the obstruction.



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AUXILIARY



TIME TO REFLECT

December is the beginning of the year for some religious calendars, mid-year or more for organizations such as ours, and the end of the year (especially for taxes) for all of us.

Depending upon preferences or circumstances, this last month is hectic or serene.

So with warm holiday greetings, we hope that you have time to slow your busy pace to spend time with your loved ones, yourself, and to rest. Then you can start 1978 refreshed.

In the eighth month of our auxiliary "year," much has been accomplished. As earlier reported, September Health Through Education Workshops for auxiliary leaders were held in Montgomery.

Four District Health Education Action Workshops in Huntsville, Birmingham, Montgomery, and Mobile, have been jointly sponsored with the PTA and the State Department of Education. Mrs. O. B. Carr, Jr., State Health Education chairman, her committee, and Dr. Mabel Robinson, Health Education Specialist, have been working non-stop to insure their success.

In addition to the panel of other speakers who created exciting chemistry to stimulate reactions of Health Education Action throughout Alabama, Dr. and Mrs. William Carlyon joined us.

Dr. William Carlyon, AMA Health Education Director, told of AMA's resolutions and emphasis on health education which date back to 1906. He also told us of progress made on the national scene.

His wife, Mrs. Pauline Carlyon, Director of Health Education Programs, National PTA, reaffirmed PTA commitment and told us of PTA programs designed to accomplish health education action. Hopefully *our* action as catalysts will speed the parental concern needed to result in comprehensive health education reality soon.

Although AMA-ERF has been featured before on this page, please remember that the beautiful Christmas sharing cards many of you received sent greetings from physicians and auxilians who contributed to medical education in lieu of sending individual cards to you.

Checks presented at convention each year to Dr. Pittman, UAB School of Medicine, and to Dr. Kreisberg, UAS School of Medicine, reflect concern for our future physicians with donations made through December of the previous year.

Mrs. Howard Johnson, in spite of illness, continues her ever magnificent job of urging us toward the goal of $25 per member donation.

A new card has been designed to honor a physician colleague who has extended professional courtesy to your family. The tax-deductible donation is made in the physician's name to the medical school of choice.

If you talk to medical students, interns, or residents, please mention AMA-ERF Loan availability to them. Recently while visiting the USA Medical Student Auxiliary, I mentioned AMA-ERF loans as a possible way to ease financial strain. This active group stimulated my pleasant reflection upon all that has happened in the 22 years since I began to earn the "PHT" degree as they are doing. Both medical schools have many excellent future physicians if the cliche; "Behind every successful man is a good woman," (or vice-versa) is true.

We also have a 10th anniversary to celebrate! Mrs. William Smith, Janie, has been the editor of the auxiliary newsletter, now AMASA News, for 10 years. In addition, she serves as state communications chairman. As you must also recognize, Janie's husband is editor of the excellent journal you now peruse. He is MASA's Secretary-Treasurer, too. The auxiliary is indebted to Janie and to her committee for her long, efficient service and for communicating what's happening now in auxiliary.

International Health chairman, Mrs. Arthur Stamler, coordinates our endeaver in this area with her husband for "Operation Outreach." Lee created three unusual needlepoint designs for Guatemalan Mayan Indians. These have been circulating throughout county auxiliaries. Donations will aid in the shipping expense for X-ray equipment and supplies gathered by MASA members for the 200-bed hospital de Cuilapa.

Mrs. Dewey White, wife of Alabama's only medical legislator and Legislative chairman, stresses that "Doctor For The Day" physicians are urgently needed. She continues to send an informative legislative newsletter monthly to every county auxiliary. Along with Mrs. G. L. Wideman, ALAPAC chairman, Lil urges participation in the $200 tax-deductible PAR Program. Do notify Richard Whitaker, MASA, if you can serve as "Doctor For the Day," and to send in your PAR deduction.

Immunization awareness through "hopscotching to immunization" is being achieved in many counties. Using material from Madison County's already effective immunization drive, and from AMA, Mrs. Robert White, Community Health Chairman, has helped make immunization a priority throughout the state. Carol attended the Public Health's forum on immunization in Montgomery to tell of our concern and activity.

January 25th, Auxiliary officers, board members, and guests will meet in Birmingham for the Winter Board meeting. Featured reports from the six county president-elects and officers who attended the AMA Auxiliary Fall Confluence in Chicago will be received. More on this later.

Best wishes for a healthy, happy holiday and new year!

Helene

MRS. JOHN S. TAYLOR

PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

DERMATOLOGY: Age 28; University of Alabama, 1974; seeking practice in town of 30,000 plus population. Available July 1978. LW-001.

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board eligible 1978; National Board; Available July 1, 1978. LW-004.

FAMILY PRACTICE: Age 30, Duke University 1968, interested in working with a faamily practice, general practice, or emergency room physician while serving a straight internal medicine internship at University of Alabama Hospitals in Birmingham during the period July 1977-June 1978. LW-005.

FAMILY PRACTICE: Age 26; University of Tennessee, 1974; American Board certified; National Board; will be American Board eligible 1978; seeking practice in town of 5,000-50,000 population. Available February 1978. LW-006.

FAMILY PRACTICE: Age 31; University of Alabama, 1974; National Board; interested in practicing in a medium to small town with high physician needs. Available immediately. LW-016.

FAMILY PRACTICE: Age 28; Washington University, 1975; seeking practice in town of 15,000 plus population near Gulf Coast. American Board eligible; National Board. Available July 1978. LW-017

GASTROENTEROLOGY/INTERNAL Medicine: Age 29; Medical College of Georgia, 1973; National Board certified, American Board certified and passed Flex Examination; seeking partnership, multi-specialty group, single specialty group, Institutionally based or research. Available July 1978. LW-06624.

GENERAL PRACTICE: Age 35; University of Alabama, 1975; seeking practice in northern or central Alabama in town of 50,000 or more population. Available April 1978. LW-002.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; Presently in the army completing a two year obligation, (wife is also a Board eligible Internist and is presently completing an infectious disease fellowship.) Wish to join a small group in general internal medicine preferably a small city with rural surroundings. Available August 1978. LW-018. (See LW-019.)

INTERNAL MEDICINE/RHEUMATOLOGY: Age 31; Ohio State University, 19722; American Board certified; American Board eligible; seeking single specialty group, institutional based or multi-specialty group. Available July 1978. LW-09159.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 30; University of Louisville 1973; seeking clinical practice. Available July 1978. LW-007.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; seeking practice in general internal medicine with a small group, preferably a small city rural surroundings. Available July 1978. LW-019. (See LW-018.)

OPHTHALMOLOGY: Age 30; University of Illinois, 1972; American Board certified; National Board; seeking single specialty group, assistant or associate in the Birmingham or Huntsville area or with a town of 100,000-250,000 population. Available July 1978. LW-010.

ORTHOPEDIC SURGERY: Age 32; Medical College of Georgia, 1971; will be American Board eligible 1978; seeking single specialty group, partnership, industrial or institutionally based, or solo. Available January 1978. LW-06158.

ORTHOPEDIC SURGERY: Age 32; University of Texas, 71; seeking practice in town of 25,000-30,000 population. Available July 1978. LW-015.

OTOLARYNGOLOGY: Age 30; Ohio State University, 73; Will be American Board eligible 1978; seeking assistant or associate practice in town of 30,000-100,000 population. Available July 1978. LW-012.

PEDIATRIC HEMATOLOGY/ONCOLOGY: Age 28; University of Michigan, 73; American Board certified; National Board certified; seeking practice in Birmingham. Available July 1978. LW-013.

SOPHOMORE medical student—age 22, interested in a town or hospital assiting with medical school costs in return for service there in general/family practice. Available 1980. LW-01.

SURGERY: Age 32; Washington University, 1971; American Board eligible; seeking partnership, single specialty group or multi-specialty group. Available July 1978. LW-09077.

SURGERY: Age 31; University of Alabama, 1973; National Board certified; will be American Board eligible 1978; seeking partnership, single specialty group, solo or multi-specialty group. Available July 1978. LW-07827.

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

PHYSICIANS WANTED
(Opportunities for Practice)

ALL SPECIALTIES—urban and rural Alabama private practice opportunities including Assistant Prof. Community Health, $40,000 guarantee, moving, other fringes. PW-17.

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and

larger cities contains a progressive 74 bed hospital. Ample opportunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital privileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

GENERAL PRACTITIONER'S 2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-5

GENERAL PRACTITIONER—Opportunity in central Alabama town of 4500 population. Within 17 miles north of Montgomery, Alabama. The finest recreational areas in Alabama consisting of 2 large lakes. Newly expanded 69 bed hospital with 8 active staff members. Invitation to visit with expenses paid will be directed to those qualified. PW-9.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER Wanted—Town of 6,000 population, trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities include golf course, country clubs, tennis courts. PW-7

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16. ●

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June 2: 2 A.M. Me! Cramming for Inorganic Chemistry finals. Man was I beat!



Sunday, May 2: My first date with Jan at the lake.



May 26: Inter-Fraternity Council Championship. We won 7-6!



June 15: Today, I graduated!

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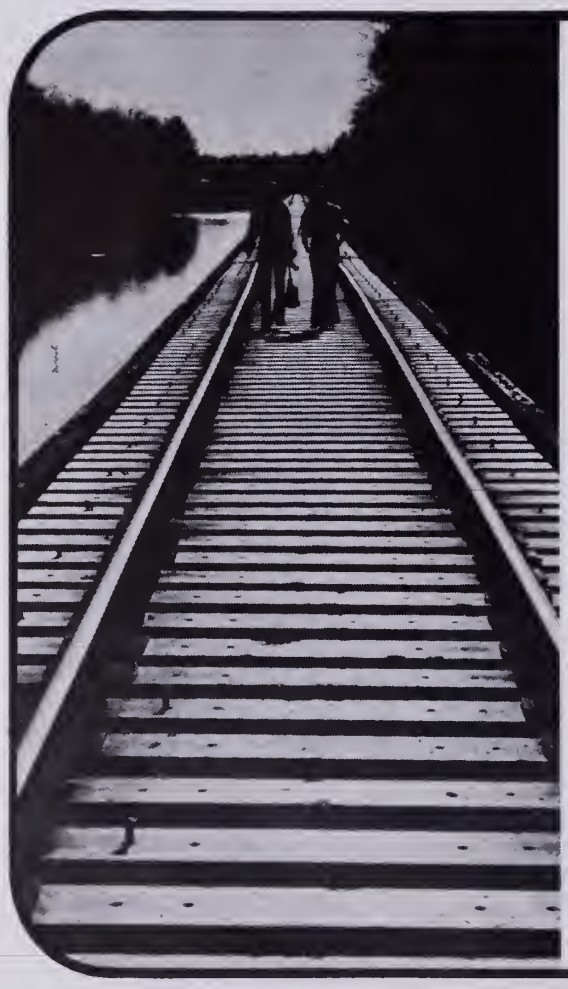
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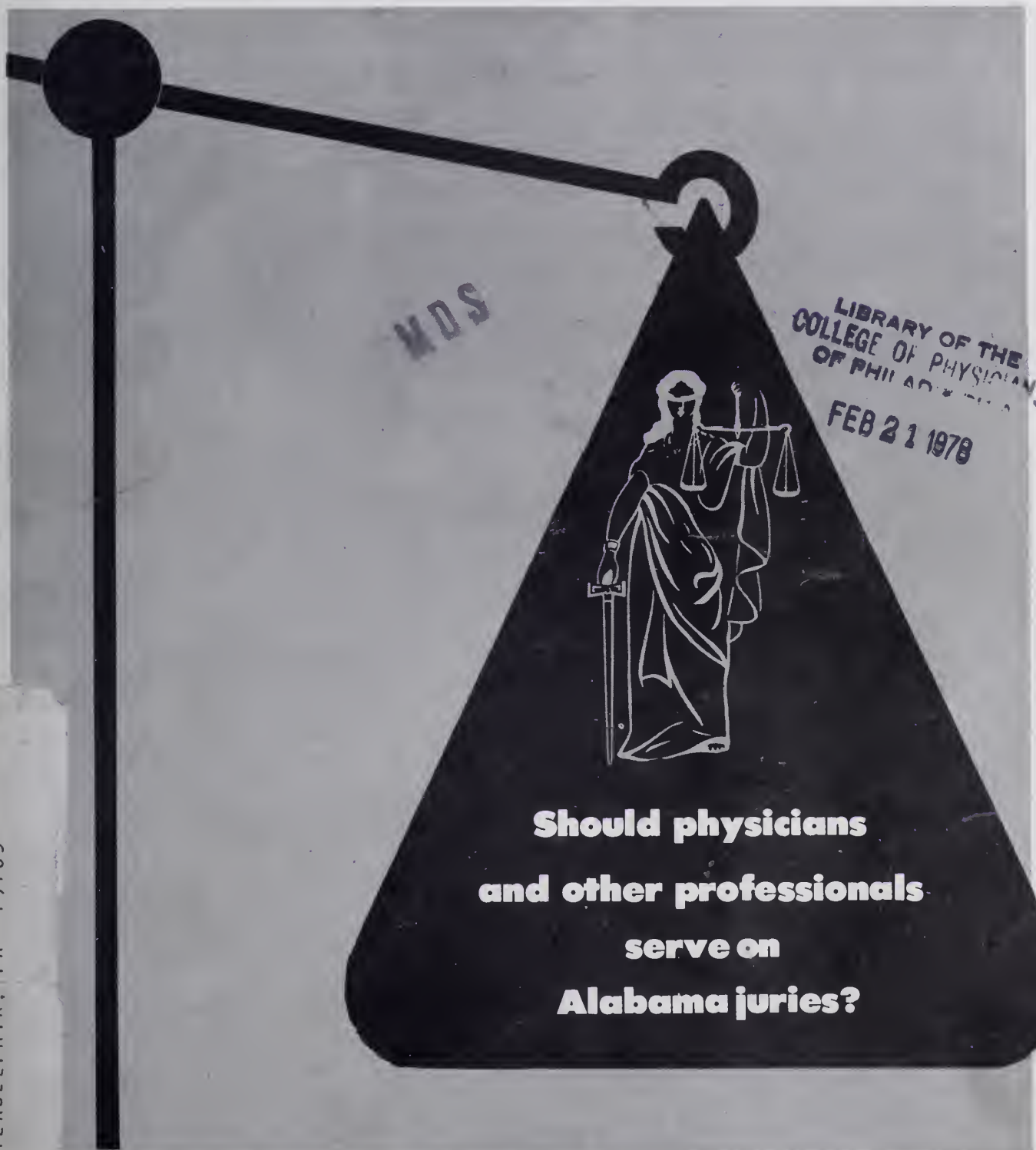
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JANUARY 1978

vol. 47 #1



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"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE
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In The February Journal

The rollicking life and times of one of the most beloved pediatricians in Alabama, Dr. Robert Parker, will be told in the February *Journal* from the viewpoint of one of his patients from the 1930s, William H. McDonald.

Now 75 and Executive Secretary of the State Board of Medical Examiners, Dr. Parker will guide younger physicians through the kind of medical economics he learned in opening his practice the month after the stock market crash of October 1929; how to run a practice on a gross income of $33 a month when rent alone was $55; how to equip an office and treatment room with no capital whatever, and a stranger in town to boot.

Dr. Parker will guide us through the war years when, as a military doctor, he conceived a bold medical plan to mold hundreds of draft rejectees into a division he was going to name the 606th (after the VD treatment of the time, which gives part of the story away) and call his men the Rough Riders — only to be turned down by the Surgeon General in Washington.

Dr. Parker may not tell all, as who does, but as the happy warrior of Alabama medicine for more than a half-century he will tell enough. ●

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Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual,* published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost ($6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost ($1.65) from MASA.

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Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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FROM THE EXECUTIVE DIRECTOR

Looking west from the portico of the central offices of MASA, the dome of the State Capitol is just a couple of blocks away.

So near, and yet, it sometimes seems, so far. For under that dome is the Alabama Legislature, which represents every diverse socio-economic group in the state, from the Tennessee line to Florida.

The pressures on the lawmakers are sometimes intense, no less so in the field of health legislation. In this era of consumerism, there is hardly any group, however small, that isn't sure of its expertise in some aspect of health care.

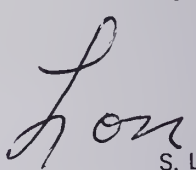
This is a legislative year and an election year. MASA's Governmental Affairs and Legal Departments will be under increasing burden to monitor all bills that are introduced for any that might bear on public health and physicians' interests, analyze them and, if necessary, call on doctors to testify or to lobby legislators. Additionally, MASA has its own legislation to shape and foster.

Rally behind us. We can only do so much out on the point alone, although we are representing you.

It was through such team efforts, for example, that the Medical Liability Act was passed and, in another fight, the State Reorganization plan, which would have vitiated the Committee of Public Health, defeated.

Only through the concerted efforts of staff and membership can we succeed in protecting the health interests of Alabamians from those who have always been ready to offer panaceas and even a potion of political snake oil.

All that is necessary for the triumph of evil, in the truth of Edmund Burke, is that good men do nothing.



S. Lon Conner

ABOUT THE COVER

The first idea for this month's cover was to get a picture of a sitting jury to illustrate the article "1000 Years of Trial By Jury." A check was made of photographic departments of newspapers, libraries and the state Department of Archives & History, where Director Milo Howard energetically joined the search. Everyone, at all levels, had seen jury pictures, but none could be found, not even a good drawing. So it was left for Phyllis Smith, whose name has been elevated to the *Journal* masthead this month for Production & Design, to improvise a cover.



Simple drops of water help make COLACE® the most widely used stool softener.

COLACE®
dioctyl sodium sulfosuccinate

COLACE works by stool-softening action alone, free from laxative stimulation. Simply by letting natural intestinal water permeate stools, COLACE helps to eliminate the hard, dry stools common to constipation.

COLACE works to prevent pain and straining at stool with minimum chance of griping or cramps, particularly in patients with delicate anorectal disorders. COLACE is safe and non-habit forming in short- or long-term therapy. COLACE—the simple water way to ease constipation from infancy to old age. Capsules, syrup or liquid.

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Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

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Vasodilan has not been reported to affect the treatment of coexisting disease; it is compatible with such drugs as hypoglycemics and miotics.

Vasodilan–compatible with your total regimen for vascular insufficiency

Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U S Pat. No. 3,056,836



VASODILAN® 20-mg tablets

(ISOXSUPRINE HCl)

20 mg q.i.d. recommended dosage

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he's active
he's effectively maintained on

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Each capsule or tablespoon (15 ml) elixir contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg. Elixir: alcohol 15%

- high theophylline for effective around-the-clock therapy
- 100% free theophylline
- individualized theophylline dosage schedule

Indications: For the symptomatic treatment of bronchospastic conditions such as bronchial asthma, asthmatic bronchitis, chronic bronchitis, and pulmonary emphysema.

Dosage: Initial: Adults: 1-2 capsules or 1-2 tablespoonfuls elixir every 6-8 hours, children 8-12: 1 tablespoonful or one capsule every 6-8 hours and children under 8: 3 to 5 mg theophylline/kg body weight every 6-8 hours. Theophylline dosage may be cautiously increased to 2000 mg/24 hr in adults or 7 mg/kg in children; monitoring of serum theophylline levels at higher dosages is recommended.

Precautions: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other xanthine derivatives concurrently. Use in case of pregnancy only when clearly needed.

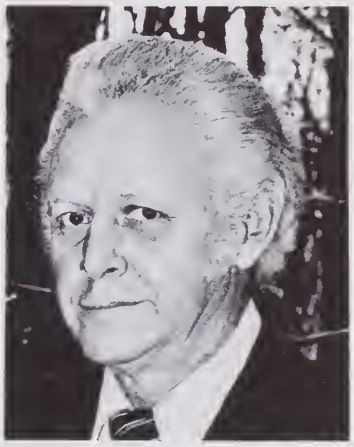
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea and vomiting. The frequency of adverse reactions is related to the serum theophylline level and are not usually a problem at serum theophylline levels below 20μg/ml.

How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Elixir in bottles of 1 pint and 1 gallon.

Mead Johnson

PHARMACEUTICAL DIVISION

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'Compliance' And 'Cost Containment'

After a peaceful holiday season with no edicts or frontal or flank attacks on the medical profession, "Zoro" Califano has struck again.

This time the concept of cost containment and compliance has invaded the domain of the private citizen. Smoking is costing the Health Care system too much, so in the interest of holding down health care costs "Thou Shalt Not Smoke" signs shall be posted.

I'm reminded of the V.D. lectures and slide shows I vigorously inflicted upon servicemen years ago in which I extolled the virtues of celibacy, etc. I do not recall a single instance when a grateful airman later reported having been saved from certain affliction by my presentation, and what I may have done to the impressionable, uninitiated, I shudder to think.

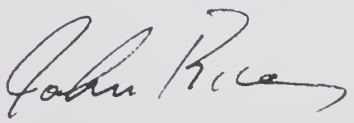
As medical evangelists and physicians interested in prevention of disease and patient education we can certainly not disagree with the soundness of bringing attention to the serious consequences of heavy smoking, but we can and should demand realism and cost effectiveness in methods devised to rid the human race of its self-destructive tendencies.

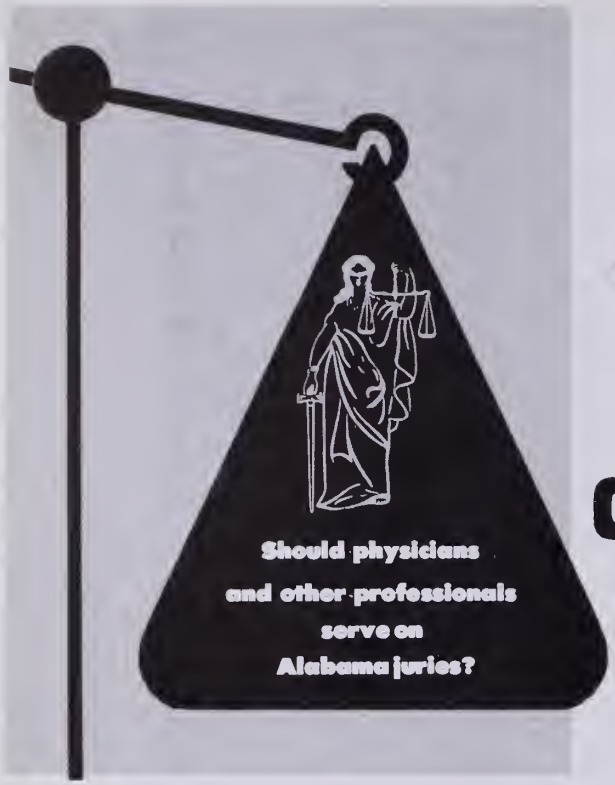
"Compliance" and "cost-containment" are two of the newer words that have been added to the lexicon of palatable terms that have been bent by bureaucracy.

In its present usage "compliance" really means obedience and to be compliant means "right," to be non-compliant means "wrong," or, worse yet, "in defiance of the law."

Cost containment has almost certainly meant cost control from the beginning. As American business, American hospitals and nursing homes have learned, compliance has become increasingly complex because compliance with our agency's wishes produces noncompliance for another, and being compliant may be one of the most substantial reasons cost control becomes impossible.

How much of the cost of institutional care can be attributed to unnecessary rules, I cannot say but it seems obvious that resistance to some aspects of "compliance" is right and just and necessary if costs of medical and institutional care are to be cost effective.





1000 YEARS OF TRIAL BY JURY

By WILLIAM H. McDONALD

Some physicians have expressed an interest in restoring the right, now circumscribed by statute, to serve on juries.

The Board of Censors, in its Nov. 16 meeting, referred to the reference committee at the annual session the suggestion that all occupational exemptions from jury service be removed in Alabama.

Among those presently exempt under the law, in addition to physicians, are:

Judges, attorneys, officers of the United States, officers of the executive department of state government, sheriffs and deputies, clerks of the courts and county commissioners, dentists, pharmacists, optometrists, veterinarians, teachers, actuaries, officers and engineers of riverboats, drivers of trucks and buses under authority of the Public Service Commission, railroad engineers and firemen, conductors, train dispatchers, station agents, telegraph operators, newspaper reporters, embalmers, radio broadcasting engineers and announcers, officers and enlisted men of the National Guard, etc.

A hearing on proposed new Rules of Criminal Procedure was held by the Alabama Supreme Court Jan. 17. Leon C. Hamrick, M.D., chairman of the Board of Censors, told the court that the wholesale and automatic exclusion of members of any group or profession from jury duty service violates the intent of the system.

The House of the Alabama Legislature voted 76-10 Jan. 24 to strike all jury duty exemptions except those for judges and lawyers.

A brief history of the jury system may be helpful to physicians in making up their minds on this crucial issue. It follows.

The jury, as we know it, is an Anglo-American institution. Its powers and duties vary greatly, depending on the laws of the countries, provinces, or states in which it is found.

However, as a practical matter, what remains of the jury is today almost wholly American: about 120,000 jury trials are conducted in this country each year, more than 90 per cent of all jury trials in the world.

Most countries, including even Great Britain, which adopted the jury system at some time in history, have now largely abandoned it, as will be seen.

The origins of the jury are lost in antiquity, but most authorities believe it may have been indigenous to England or have been brought over by the Norman invaders in 1066.

Throughout its history, notes one authority, it has been overpraised as a charter of liberty and overcriticized for its reliance on incompetent amateurs in the administration of justice.

Rural To Urban

Originally, so far as can be determined, jurors were neighborhood witnesses who passed judgment on what they themselves knew. But this concept changed with the breakdown of medieval society and the growth of the towns. Thereafter, the jury was called in to decide the facts in the case, based upon evidence presented in court.

In the 15th Century, irrational modes of trial, such as ordeal, in which the defendant was subjected to various tortures to prove his guilt or innocence, were replaced by the jury trial, which became the established form of trial for both criminal and civil cases at common law.

Two historical forces exported the jury from England: the spread of empire, which brought the jury to Asia, Africa and the American continent; and the French Revolution and its aftermath, which brought the jury, as a symbol of popular government, to the European continent—first to France itself and then, through Napoleon, to the Rhineland, Belgium, most of the remaining German states, Austria-Hungary, Russia, Italy, Switzerland, Holland and Luxembourg, al-

though the last two abolished it immediately after Napoleon's defeat.

In each of these countries, use of the jury was from the outset limited to trials of major crimes and of political crimes against the state.

Decline of Juries

The emasculation of the jury system really commenced in the 19th Century, by various acts in several countries. Germany abandoned the jury in 1924. Both the Soviet bloc and the fascist countries abolished it outright. France never restored the jury system after it was abolished during the German occupation of World War II. Japan did away with its jury system, after a short experiment, in 1943.

Hence, the effort to introduce the jury outside the Anglo-American orbit has failed. Further, in Britain itself, its use is now limited by statute to a small number and category of cases.

In short, the jury system that we tend to regard as sacrosanct is not considered so anywhere else in the world.

Use of the jury in the United States, now its principal practitioner, depends on two factors: the degree to which it is available as a matter of right; and the degree to which the parties themselves choose to use it.

The civil status of juries is less clear, some authorities say, than its criminal status. For example, the U.S. Supreme Court ruled in 1968 *(Duncan v. Louisiana)* that a jury trial is a constitutional right. The sanctity of the jury, even in this country, is less clear, as viewed from the Supreme Court, in civil cases, although mandates are laid out by statute for use in these cases, varying from state to state.

Since some states permit the parties to waive jury trial by varying laws, the actual use of the jury in practice, even in criminal cases, varies widely: There were three jury trials in criminal cases per 100,000 population in Connecticut in one recent year, while Georgia, at the other extreme, had 144 per 100,000, or almost 50 times the frequency.

Trend To 'Democratization'

It was once true that minimum requirements were established for jury service, standards such as property and competence. The trend nowadays is away from this toward a total "democratization" of juries by random selection of a cross section of a community. Since 1969, the federal courts have led the way with randomization.

Most juries exempt some groups from jury service, and apparently this has rarely been challenged, even by the groups themselves. Routinely excluded in most states are: physicians, lawyers, policeman, and so on. And many other groups are excused under the hardship rule — service would interfere with their lives or livelihood, they contend.

It may be risky to make too much of the right of trial by a jury of "peers." The early meaning of "peers" was comrade, associate, fellow. The usage found in the British peerage, with its five classes, is not American, though many may wish it were, for no peer of the realm or of the United Kingdom could be tried for treason or felony except by *his* peers—nice work if you can get it.

Jury Selection. This has become an art, perhaps a black art, which very recently has been subjected to some highly sophisticated techniques of social science, reviewed at some length recently in such publications as *Science* and *Psychology Today.*

The commitment of important decisions to a random group of layman has been moderated, particularly in the United States, by an elaborate ritual, or screening process, called *voir dire,* at which prospective jurors are challenged either for cause (if there is a likelihood, in the opinion of counsel, of bias) or "peremptorily," for any reason or none.

Darrow Was An Expert

American trial tradition attaches much significance to jury selection. Clarence Darrow, the famous criminal lawyer, admitted that much of his success was due to his ability to strike a jury, even in hostile and strange territory.

Louis Nizer, the King of Torts, as he has been called, owed much of his phenomenal success in extracting huge damage verdicts to the same uncanny ability.

Law firms that have a complete file on jurors — their tastes, prejudices, records, etc.—may be hired at great cost to strike only, not participating in the ensuing case at all. Presumably, this ability to seat a favorable jury has been diminished now that venires have become more randomized.

Traditionally, juries had 12 members and unananimity was required. That is undergoing some change. Oregon, for example, allows 10:2 verdicts in all criminal cases (and example followed in 1968 by Great Britain).

A few Southern states allow majority verdicts in misdemeanor trials. In civil trials, many states now allow the 10:2 verdict. (Curiously, U.S. courts martial adopt the European system: unless at least two-thirds of all jurors vote guilty, the defendant must be acquitted.)

Liability and Damages

In civil cases, juries decide the question of liability and the amount of damages — the latter having gotten so completely out of hand that a major insurer, Aetna, is now engaged in a massive national advertising campaign to persuade jurors, or potential jurors, that the millions of dollars they are so freely giving away are the property of all policy holders, whether in automobile accident cases, malpractice, whatever.

The sharing of responsibility between the jury and the judge is extremely complex. Although, basically, the judge is there to rule on the law and the jury on determinations of fact, there is much overlap and intermingling of authority.

A judge may, for example, simply refuse to let a jury hear the evidence; or, he may direct a verdict of acquittal. Or, in a civil trial, he may interpose his authority and find for either plaintiff or defendant. (He cannot, however, direct a guilty verdict in a criminal trial.)

He may himself weight the evidence and instruct the jury accordingly, within certain limits. He may even throw out a verdict he does not consider in keeping with the evidence.

Born In Controversy

Since its inception, apparently, the jury system has been embroiled in controversy. Scarcely a famous man has not, at some time, entered the debate: Montesquieu, Blackstone, Jefferson. Basically, the arguments fall in several categories that have not changed. Among the contentions are:

A jury's competence. Judges, some say, by reason of training, discipline and experience, are better able to decide cases (and most countries now agree, even those in which lay judges sit with judges learned in the law, to act as a kind of community leaven).

CONTINUED ON PAGE 26

Report Of The Alabama Delegation To The AMA House Of Delegates Interim Meeting Chicago, Illinois December 4-7, 1977

DELEGATES

Paul W. Burleson, M.D.
Birmingham

O. Emfinger, M.D.
Union Springs

W. E. White, M.D.
Anniston

ALTERNATES

E. B. Glenn, M.D.
Birmingham

Alfred Habeeb, M.D.
Birmingham

Julius Michaelson, M.D.
Foley

TO: Members Of The Medical Association Of The State Of Alabama
SUBJECT: Report Of The AMA House Of Delegates Interim Meeting

The Alabama delegation to the interim meeting of AMA in Chicago Dec. 4-7 was composed of its three delegates and three alternate delegates, along with MASA President John B. M. Rice, Jr., President-elect Hiliary Henderson and Board of Censors Chairman Leon C. Hamrick. They were assisted by staff members S. Lon Conner, Executive Director, and William H. McDonald, Communications and Printing.

The keynote address during the opening session on Sunday, Dec. 4, was given by John H. Budd, M.D., AMA President, who called on physicians to adopt a posture of "aggressive moderation" in striving for an "equitable and efficacious system of health care delivery."

Dr. Budd cautioned against "knee jerk reactions to everything the federal government does," reminding delegates that no political authority acts for itself alone but also for what it perceives to be the demands of the people.

Although the climactic moment may have been when the House voted by a margin of 4-1 to reject the vigorous appeal led by Louisiana to repudiate the AMA's comprehensive health insurance bill, the most significant new development was the vote to seat specialty societies, thus greatly enlarging the scope and meaning of the federation.

The Alabama delegation caucused each morning at 7 to discuss reference committee assignments and to review the wishes of its constituency back home. One member of the delegation attended each committee hearing and, in some instances, there were two present.

Your delegation was again impressed with the democratic process of the deliberative body that is the House of Delegates. No dissenting view, no matter how strong or how divergent from previous AMA policy, was ever choked off. Full and fair expression was given to all sides, despite the shortage of time.

Respectfully submitted,

Paul W. Burleson, M.D., Chairman

Oriziba Emfinger, M.D.

William E. White, M.D.

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1. Goldberg HL, Finnerty RJ, Cole JO. Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

Brief Summary of Prescribing Information
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Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

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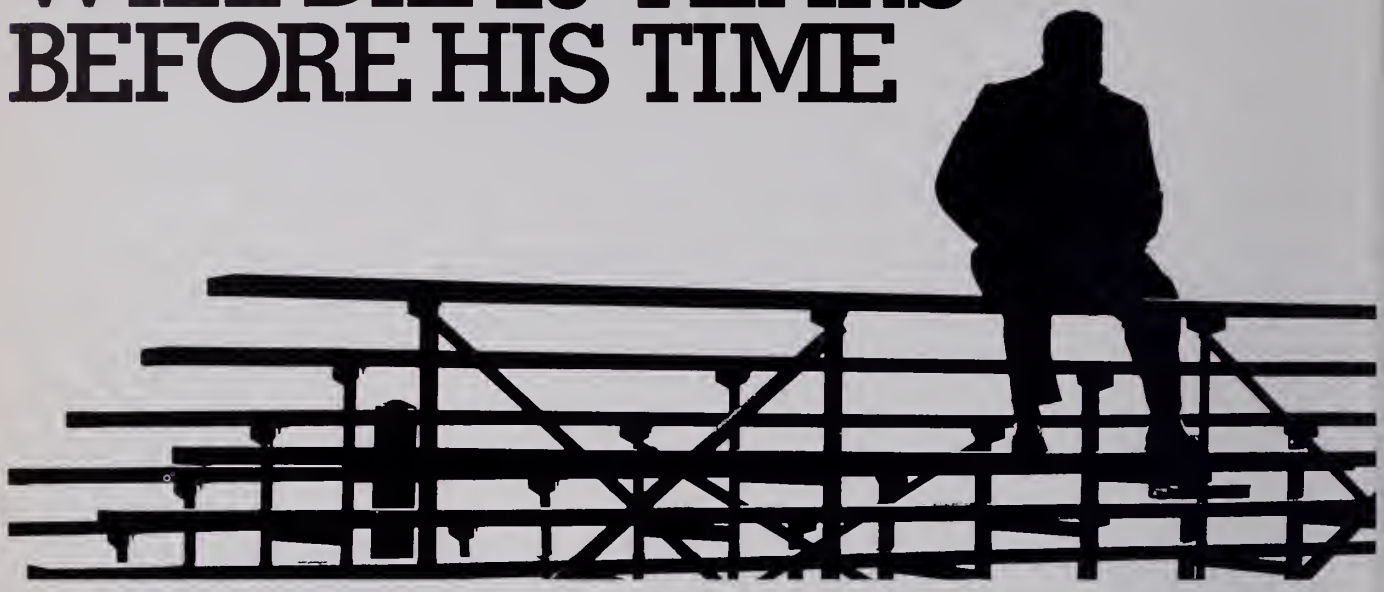


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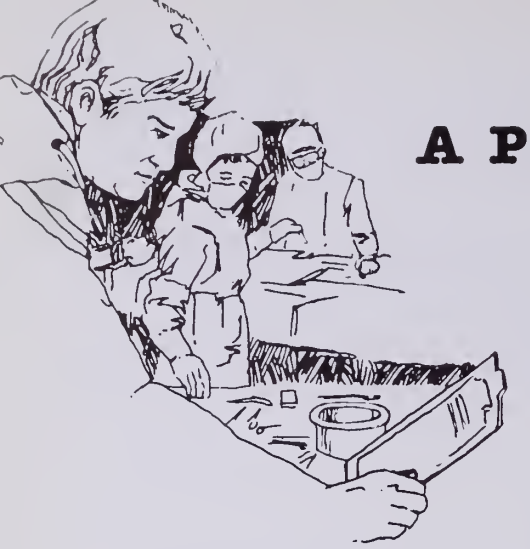
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A Present For Alabama

DEAN'S REPORT

WILLIAM R. WILLARD, M.D.
Dean, College of Community
Health Sciences
The University of Alabama

Having recently experienced the happy holidays of Christmas and entered the New Year, it may seem out of season to reflect upon graduation from medical school or the completion of a residency.

However, it is not out of season for many students and residents. Because of curricular changes and personal factors, a great many students and residents will finish their programs this winter in the middle of the academic year.

They and their friends will experience the emotion and elation that goes with graduation. They will realize that the midnight oil they burned was not burned in vain. They will experience the satisfaction that comes from completing a long and arduous program. This euphoria is of limited duration because soon they must face the realities of life.

As faculty and commencement speakers have told them, commencement is in reality just a beginning of a lifetime career of study and hard work if the graduates are to be good physicians. Their performance henceforth will be judged, not by their teachers, but by their professional colleagues and the public.

Their life must be energized and for many of the students and residents their goals remain to be clearly defined. For those who have just completed a residency or will complete it by June, the process of defining their goals and location of practice has already begun. For those completing medical school, the search for a suitable residency is well along, but for both groups, the final decision has not been made in many cases.

A Rewarding Role

For the medical educator and administrator, the graduation ceremony marks also a special milestone in their career. Their greatest reward is to see the students and residents they trained succeed. They have worked hard with both the students and the residents. With many they have established a close and fast friendship.

They have spent many hours together; not only in the teaching setting, but also in counseling and advising sessions; not just about the small and large academic problems that arise during any educational program, but in helping the students and residents to find the best role and setting in which to use their talents which will best serve the student, the resident, and his family as well as the public.

The good teacher is known by the quality of students he trains and he is revered and loved by them for his unselfish contribution in enriching their lives. The students and residents are his monument.

So it is in every educational institution and training program. So it is in the College of Community Health Sciences, a new institution born by the Legislative mandate of late 1971 which charged The University of Alabama to develop a medical education program to improve the health care for Alabama's smaller towns and rural areas.

With planning and development beginning in the middle of 1972, the College of Community Health Sciences has developed a Family Practice Residency with 36 residents; a clinical training program for medical students, now with 25 students which will peak to somewhere between 44 and 50 by 1979.

It has developed a growing program of continuing education and an active involvement with the various allied health programs on campus, cooperating with other colleges and schools of the University, creating a new emphasis upon health among the disciplines within the University which can contribute to this goal.

The College clearly has tailored its program and directed its energies to meeting the Legislative mandate.

The pipeline of residents and medical students is now just beginning to flow. It would be presumptous this early to claim that the College of Community Health Sciences is an unqualified success in all of its endeavors, but the first fruits of its labor are promising indeed.

The Results

Of 14 Family Practice residents who will complete the College of Community Health Sciences program by June of 1978, nine have committed

themselves to practice in small town Alabama, two have accepted fourth year fellowships in Family Medicine, two have military obligations to discharge and only one remains undecided. Of the six medical students who will have graduated by June of 1978, four have indicated a choice for a Family Medicine residency and two have indicated a choice for a flexible internship which probably will lead them into a career of primary care, possibly Family Medicine.

The table below concerning the 14 residents who will finish the College of Community Health Sciences program this year is of unusual interest. The residents come from eight states, primarily in the Southeastern United States, but only half were born in Alabama.

All but three went to medical school in Alabama and, of course, all had their residency training in the state at Tuscaloosa and the College's outreach locations. This lends credence to the studies indicating that where residents go to medical school and take their residency, influences their practice location much more than the place where they grew up.

Even more remarkable is their selection of practice locations; they are widely scattered throughout the state in the smaller towns.

Also relevant, the College of Community Health Sciences faculty has devoted important energies in working with communities all over the state. In spite of the fact that Alabama now has medical education programs in most of its regions, the College of Community Health Sciences and The University of Alabama clearly are serving virtually all areas of the state; it cannot be considered as a regional institution whose activities are limited to Northwest Alabama.

More To Come

These residents who will establish new practices in Alabama, and the promise of many more to come, is the best present that the College of Community Health Sciences can give to Alabama.

What will the future bring? No one can predict for certain, but the efforts of the College and the first fruits of its work, indicate that there is every promise that the College will continue to discharge the mandate given it by the Legislature.

However, The College can continue to serve Alabama even better only if the people and the Legislature continue to support our growing financial needs and give us their cooperation in the future as they have in the past. ●

UNIVERSITY OF ALABAMA
COLLEGE OF COMMUNITY HEALTH SCIENCES
RESIDENTS COMPLETING FAMILY PRACTICE RESIDENCY
PROGRAM BY JUNE 30, 1978

Resident	Date Of Completion	Place Of Birth	Undergraduate School	Medical School	Practice Site
Belyeau, John Michael	12/21/77	Oneonta, AL	Alabama	UAB	Albertville
Bronstein, Alvin Charles	06/30/78	Paducah, KY	Washington	Kentucky	4th Year Fellowship
Dismuke, Keith Alan	02/28/78	Troy, AL	Florida	UAB	Tuscaloosa
Fritz, Herman Joseph	04/30/78	Nashville, TN	Tulane	UAB	Tuscaloosa
Gober, John Rickey	06/30/78	Cullman, AL	Samford	UAB	Cullman
Keller, John Albert	12/31/77	Montocello, AK	Auburn	UAB	York
Knight, Nicholas Alan	12/31/77	Atlanta, GA	Georgia	UAB	Selma
Nolin, William Barry	06/30/78	Graceville, FL	Auburn	UAB	Atmore
Peters, Michael Wayne	04/30/78	Birmingham, AL	Auburn	UAB	Albertville
Shannon, Wendell Kirk	02/28/78	Athens, AL	Florence State	UAB	Athens
Sullivan, John Burke	06/30/78	Birmingham, AL	Spring Hill	UAB	4th Year Fellowship
Weaver, Robert Michael	06/30/78	Century, FL	Louisiana Tech	LSU	Undecided
Wells, Michael Aubrey	06/30/78	Andalusia, AL	Alabama	UAB	Military
Young, David Bruce	06/30/78	New Orleans, LA	Louisiana Tech	LSU	Military

How Great The Menace?

Editor, The Journal:

One of the puzzling dilemmas of our technological times is that frequently when we approach a problem we cannot be sure that the "cure" is not worse than the problem itself.

The present controversy of the ravages of the fire ant through the southern states versus the possible hazards of the insecticide Mirex is just such a dilemma.

Since Mirex is at present the most effective control measure against the spreading fire ant, this kind of technological problem remains sharply in focus.

Intrigued by the puzzle, I would like to survey my fellow physicians and health services personnel of the states affected by the fire ant problem as to their findings regarding either or both horns of this particular dilemma. To this end, I would greatly appreciate answers to the following series of questions by all those in the know who have time and energy to spare to the problem:

- How many individuals have been stung by fire ants in your area, region, or state? Can you estimate a probable number? State sex.
- What kind of reactions to fire ants have you seen? Local reactions? How great was the swelling? Larger than an inch? Larger than 4 to 6 inches? Did swelling involve a joint? More than 1 joint? Systemic reactions? What symptoms? (Wheezing, hives, angioedema, urticaria, laryngeal edema? How soon did symptoms occur? How long did they last? Superimposed infection? Does this occur often? Are such infections severe?
- Have patients reacting to fire ants required hospitalization? If so, how many and for approximately how long?
- To your knowledge, have there been any fatalities to fire ant stings in your area, region, or state. If so, how many? Could you provide details?
- If you have any case histories of reactions to fire ant stings, they would be greatly appreciated. They should include age, sex, race, symptoms, treatment, and outcome.
- Have you any knowledge as to the success or failure of hyposensitization to fire ant venom? If so, details would be appreciated.
- To your knowledge have there been any cases of Mirex poisoning and/or illness attributed to the use of Mirex in your area, region, or state? If so, could you provide information about such incidents? Case histories, if available, about such illness would be greatly appreciated. They should include age, sex, race, symptoms, treatment and outcome.
- Have you a personal opinion about this particular problem? Do you believe the possible hazards of fire ants outweigh the possible hazards of the use of Mirex? Or vice versa.

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Claude A. Frazier, M.D.
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* INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

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Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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MEDICAL EVENTS OF 1977

The year 1977 was marked by continuing progress on many fronts in the unending fight against sickness and death, the American Medical Association reports.

Dialogues continued in a number of health areas where all the facts are not yet in hand.

Does saccharin cause cancer?

Do X-rays of the breast for possible cancer cause more harm than good?

Will Vitamin C cure the common cold?

How valid is megavitam therapy for a variety of ailments?

Is biofeedback the answer to many human ills?

Perhaps the most important medical development of the year 1977 came at the year's end, with government licensing of a new vaccine to prevent one common form of pneumonia that kills about 25,000 Americans each year.

Reports of a field trial of the vaccine held in South Africa where published in the *Journal* of the American Medical Association in December.

One of the potentially most important developments actually became known a few weeks before the end of 1976 with publication of results of a field test in Iran of a new rabies vaccine.

The product, developed at the Wistar Institute in Philadelphia, was used to treat 45 people bitten by rabid animals. It requires only six shots —instead of 14 to 21 in the present treatment—and has no side effects.

The test was done in Iran because this nation still has a serious problem with rabies among dogs and wolves. None of the victims treated with the new serum developed rabies or had any adverse reactions to the vaccine.

Medical highlights of the year:

• Saccharine was still on sale at the end of the year, after Congress agreed on legislation to postpone a ban on its use for at least 18 months. The Food and Drug Administration had banned the artificial sweetener on the basis of animal tests which indicated it might cause cancer.

• The fad diet of the year—a liquid protein substance—was declared hazardous to health by the AMA's nutrition unit. The diet is hazardous unless administered under close supervision of a physician. At the year's end several deaths were being investigated as possibly related to the diet.

• A dramatic decline in heart disease was noted toward the end of the year. Since 1950 the rate of deaths from heart disease in the United States has dropped 30%. One third of that reduction has occured in the last five years. Modifications in life style—giving up smoking, keeping weight down, regular exercise—plus control of high blood pressure are credited for the gain.

Medically Or Surgically?

• There was debate among experts as to whether angina from coronary disease should be treated medically, or whether surgery is preferred. A Chicago scientist indicated that the heart operations often aren't really necessary and that drugs and exercise can manage the problem effectively.

• The nation's medical leaders, including the AMA and its Auxiliary, launched during the year an all-out drive to immunize the nation's children against communicable diseases. Studies had found that many children were not protected.

• Massive vitamin overdoses pose a new danger to the American public, the AMA's nutrition expert warns, in the wake of court decisions and congressional actions that have virtually removed all controls from packaging and sale of vitamins. "The lid is off," the AMA warned. Meantime, a research report said that Vitamin C had been tested carefully as a treatment for the common cold, and was found wanting.

• Laetrile continued to demand considerable attention in both medical and political circles as state legislators sought to make the controversial cancer drug legal despite its ban by the FDA. All leading scientific organizations, including the AMA, declared Laetrile is worthless against cancer. But sales of the product continued, despite reports of cyanide poisoning from overdose of Laetrile.

• Guidelines were offered early in the year in JAMA for mammography screening — X-ray of the breast to determine whether cancer is present. Screening was recommended for those in high risk categories and all women past 50 years. Mammography was ruled out for women under 50 without symptoms.

• Gains were reported during the year against bladder and prostate cancer, but lung cancer increased. The five-year survival rate for most cancer patients has not changed much in 25 years.

• Studies of biofeedback continued in medical and health circles. No longer a novelty, biofeedback is now a part of treatment for certain health problems in certain individuals. It is not a cure-all and is not a complete therapy, behavioral researchers have found.

Jail Medical Reform

• A national effort was being made in 1977 to ensure that prisoners in American jails will not suffer the cruel and unusual punishment of inadequate health care. The AMA Jail Program formulated a set of minimum standards for jail health services. Six state medical societies are participating in the program, working with 30 pilot jails in gathering data and establishing pilot programs.

CONTINUED ON PAGE 51

TRIAL BY JURY

CONTINUED FROM PAGE 11

Against this is the argument that jurors, precisely because they are amateurs, bring a fresh viewpoint to trials, have common sense that is superior to that of the learned man in some matters. (Also, 12 heads are better than one.)

Juries do not follow the law. Often they don't and some say this is bad; others say it is well because jurors thus assure that the inflexibility of the general rule can be shaped to fit the particular case.

And so on. In a recent review of 7,000 cases, the presiding judges were asked to reveal how they would have decided without a jury. In both civil and criminal cases, the judges agreed with their juries in 78 per cent of the verdicts, splitting in some civil cases and disagreeing in 19 per cent of the criminal cases (where the judge would have convicted, although the jury acquitted).

If physicians become eligible for jury service, the expectation is that they would be struck, but in so doing attorneys would use up that many strikes. (In many areas, jury service would come around no more often than every four years.)

Physician-Jurors In Alabama?

If Alabama physicians were permitted by statutory change to be available for jury service, and if some were willing to perform this duty, how could this relatively small number affect the composition of Alabama juries?

The principal result might well be the ripple effect, giving physicians an impact out of all proportion to their numbers.

Many other professionals—top businessmen, contractors, accountants, corporate heads, bankers, etc.—are now begging off of juries because of "hardship."

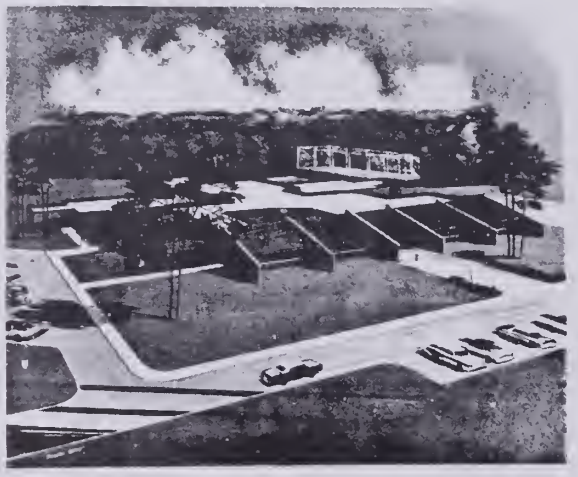
Thus many thousands of potential "peers" are effectively eliminated from service, not by statute but by personal excuses: they simply don't want to be bothered with service.

Suppose, in this context, physicians — or even a single physician in a community — announced that, despite the many demands of the profession, they were willing to serve. How, then, could other community leaders beg off?

What might happen is that doctors, by their example, *even if they never served on a jury,* could greatly enlarge the effective venire of those willing and able to serve, thus changing the complexion of the juries actually selected for trials.

It is a well-known phenomenon that just *one* forceful, knowledgeable juror can change the direction a jury will take in reaching its verdict. It is conceivable that the presence of physicians and other respected professionals on the venire could substantially alter, for the better, the quality of jury service and the verdicts rendered in Alabama. ●

References: Encyclopaedia Britannica generally, various periodicals, personal recollections, inquiries and communications.



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Rx for practice management

By George D. Oetting, Ed.D., Director of Education

Recently, while putting on a medical assistant workshop in northern Alabama, I had an opportunity to visit with a MASA member who had thoughtfully brought one of his assistants to the program. He stayed for awhile and got very interested in some of the ideas presented in the "Medical Collections" session.

Later on, over a cup of coffee, he indicated that he might need some help in this area himself. At that time, over $350,000 in uncollected bills were on his books, and he admitted that he really wasn't sure how to handle this!

To me this was a staggering amount — I would be happy to live off just the interest. A collection of only 10-20% of this would be a substantial amount. Then, I remembered an AMA publicity brochure, we received recently which might be useful to all physicians in similar circumstances.

It described a new consulting service to members who may need help in improving office business practices such as bill collecting. Normally, I do not do AMA commercials, but I feel that MASA members would like to know about this new service.

I feel it is worth consideration because the consultants provided are not hustling any particular computer hardware or consulting service. Rather, they are being paid by you to provide objective information to you in improving your practice management. I have made extracts from the AMA brochures to provide further details.

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(2) The second phase is devoted to detailed analysis of the information collected during the on-site analysis; identification of specific problem areas and/or areas with opportunity for improvement; development of alternative methods of solving the problems and achieving the improvements; and selecting and justifying the recommended alternative;

(3) The final phase consists of preparing the written report which is submitted as part of every engagement. This requires development of a summary of findings and recommendations; recording all pertinent observations; and specifying each recommendation with the supporting information, the other alternatives available and the expected results of implementing the recommendations.

Costs

The charge for AMA Consultative Services is $200 per day plus reimbursement of expenses for travel, lodging and meals incurred to complete the on-site analysis. This daily fee has been established in order to partially recover the costs of this program from those who take advantage of the services.

The minimum time for an on-site analysis is one day with the average being two to three days. The actual number of days depends on the size of the organization and the complexity of the activities being analyzed.

A number of days approximately equal to that required for on-site analysis will be spent at our offices doing detailed analysis of the area collected, formulating alternatives and preparing written recommendations. Therefore, the minimum fee would be $400 and the average would be $800-$1,200 plus out-of-pocket expenses.

The specific date for performing the on-site analysis is established by mutual agreement of the client and the consultant. The scheduling of available time will be handled by the AMA Consultative Services Program on a strict "first come, first serve" basis.

For further information, contact: John A. Guerrieri, Jr., Computer Systems in Medicine, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610, phone (312) 751-6417. ●



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Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

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Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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Indications: Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. It may be used in the treatment of cardiac arrhythmias due to digitalis intoxication.
Contraindications: Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.
Warning: There have been several reports, published and unpublished, concerning nonspecific small-bowel lesions consisting of stenosis, with or without ulceration, associated with the administration of enteric-coated potassium tablets alone or when they are used with nonenteric-coated thiazides or certain other oral diuretics. These small-bowel lesions have caused obstruction, hemorrhage and perforation. Surgery was frequently required and deaths have occurred. Available information tends to implicate enteric-coated potassium salts, although lesions of this type also occur spontaneously. Therefore, coated potassium-containing formulations should be administered only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Coated potassium tablets should be used only when adequate dietary supplementation is not practical.
Precautions: In response to a rise in the concentration of body potassium, renal excretion of the ion is increased. With normal kidney function, it is difficult, therefore, to produce potassium intoxication by oral administration. However, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentra-

Time is the test of all things



tions of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

In hypokalemic states, especially in patients on a salt-free diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation. In these circumstances, Kaon (potassium gluconate) should be supplemented with chloride. Ammonium chloride is an excellent source of chloride ion (18.7 mEq. per Gram), but it should not be used in patients with hepatic cirrhosis where ammonium salts are contraindicated. Other sources for chloride are sodium chloride and Diluted Hydrochloric Acid, U.S.P.

It should also be kept in mind that ammonium cycle cation exchange resin, sometimes used to treat hyperkalemia, should not be administered to patients with hepatic cirrhosis.

Adverse Reactions: Nausea, vomiting, diarrhea and abdominal discomfort have been reported. The symptoms and signs of potassium intoxication include paresthesias of the extremities, flaccid paralysis, listlessness, mental confusion, weakness and heaviness of the legs, fall in blood pressure, cardiac arrhythmias and heart block. Hyperkalemia may exhibit the following electrocardiographic abnormalities: disappearance of the P wave, widening and slurring of QRS complex, changes of the S-T segment, tall peaked T waves, etc.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications." Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

KAON® (potassium gluconate) ELIXIR

Description: Each 15 ml. (tablespoonful) supplies 20 mEq. of elemental potassium (as potassium gluconate, 4.68 Gm.) with saccharin and aromatics. Alcohol 5%.

Indications: See Kaon Tablets.

Precautions: See Kaon Tablets.

In hypochloremic alkalosis, potassium replacement with potassium chloride (e.g., Kaochlor® 10% Liquid) may be more advantageous than with other potassium salts.

Adverse Reactions: See Kaon Tablets.

Overdosage: See Kaon Tablets.

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Management Of The Distressed Neonate: Surgical Considerations

William L. Buntain, M.D.*

Summary

A successful outcome of neonatal surgical emergencies requires a detailed approach to early detection and consistent management. An approach based on successful experience with such problems is presented.

The realization that children are not simply miniature adults with respect to reaction to disease or response to drugs is a sine qua non of successful pediatric practice.[1] With this in mind, it is important that a concentrated program of management be instituted for the recognition and treatment of newborn infants with surgically correctable abnormalities.[2]

In a country such as the United States, which ranks fifth among industrialized sophisticated societies in terms of perinatal mortality rate,[3] it is important to anticipate future needs, for whether these infants live or die often depends on their initial preoperative management as well as their operative and postoperative care. As aptly stated by Louw[4]

> "...the secret of success lies in scrupulous attention to detail. The surgical infant requires 24 hours a day, 60 minutes an hour and 60 seconds a minute. Just that extra little bit of attention may tip the scale in the right direction."

Recognition of the differences and needs of each infant can make a competent pediatric surgeon of most good general surgeons, a competent pediatrician of most good general practitioners, in effect, a competent and safe referral for any infant unfortunate to have a life threatening anomaly.

Table I

Urgent Neonatal Surgical Emergencies
(Resuscitate & Operate)

1. Diaphragmatic Hernia
2. Ruptured Omphalocele
3. Gastroschisis
4. Volvulus
5. Intra-abdominal Organ Disruption
6. Lobar Emphysema
7. Cystic Adenomatsid Malformation
8. Intracardiac Anomalies
9. Birth Trauma
10. Exstrophy of Cloaca

Seventy to 90% of all general pediatric surgery is elective in nature.[5] The elective category does not imply any lack of necessity but merely a lack of urgency at the moment.[2] The course of acute neonatal surgical emergencies is diverse but the management is basically similar. Only a small proportion of the acute problems encountered are true emergencies because early detection of pathologic conditions and an orderly preparation can make it possible for a more organized approach.

What pathologic conditions then can be truly identified as acute neonatal surgical emergencies and to what extent? In general, these can be divided into "urgent" and "emergent" problems, the former necessitating immediate surgical intervention (following appropriate resuscitation), the later demanding immediate attention but allowing a more controlled approach.

Table I outlines the neonatal surgical problems which should be considered *urgent* requiring immediate resuscitation followed by immediate surgical intervention. The difference between ruptured omphalocele and gastroschisis is initially academic. Immediate resuscitation and surgical intervention is indicated.

*Chief of Surgery, The Children's Hospital; Associate Professor, Department of Surgery, Director, Division of Pediatric Surgery, University of Alabama School of Medicine, Birmingham, Alabama.

Reprint Requests: William L. Buntain, M.D., Department of Surgery, The Children's Hospital, 1601 6th Avenue South, Birmingham, Alabama 35233.

Table II

Emergent Neonatal Surgical Emergencies

A) Resuscitate, Cogitate and Operate

1. Intact Omphalocele
2. Esophageal Atresia, with or without Tracheoesophageal Fistula
3. Intestinal Atresia
4. Anorectal Atresia
5. Intestinal Obstruction
6. Mass lesions

B) Resuscitate, Cogitate, Palliate, and Operate

1. Neonatal Necrotizing Enterocolitis
2. Meconium Ilius
3. Meconium Plug Syndrome
4. Hypoplastic left colon
5. Hirschsprung's Disease
6. Hemorrhagic Problems
7. Exstrophy Bladder

Table III

Factors Constituting Acute (Surgical) Emergencies

A) To The Parent or Nurse

1. Irritability
2. Failure to nurse well
3. Evidence of pain or discomfort
4. Vomiting
5. Bleeding (intestinal)
6. Obstipation or constipation
7. Abdominal Distention

B) To the Physician

1. Anything that may progress to perforation or peritonitis
2. Evidence of Aspiration
3. Evidence of Pneumonitis
4. Evidence of Sepsis, with or without shock
5. Exsanguinating hemorrhage

Diaphragmatic hernia, intra-abdominal organ disruption — pending or present, congenital cystic pulmonary problems and cardiac difficulties are usually readily apparent but an urgent protocol of management must be instituted. Trauma, associated with difficult deliveries, requires suspicion, accurate diagnosis, appropriate resuscitation and surgical intervention.[6]

Emergent problems require one of two approaches, in both urgent intervention surgically is unnecessary, allowing some degree of "cogitation."

In selected instances some degree of "palliation" and/or "manipulation" is justifiable, indeed mandatory and safer. Intact omphaloceles do not require urgent intervention (in fact, they can be managed nonoperatively,[7] although we do not subscribe to this approach) as the 50% or greater incidence[8] of associated severe life-threatening congenital anomalies warrants further initial evaluation prior to surgical intervention.

Atresias, obstructions and mass lesions are emergencies, but careful resuscitation, evaluation and general preparation can safely be considered prior to intervention surgically, in most cases.

Several entities, unquestionably emergencies, can further benefit from "cogitation" and in some "palliation" is indicated; such as gastrostomy for esophageal atresia with tracheoesophageal fistula and colorectal irrigations for infants with Hirschsprung's Disease and associated enterocolitis. Saline and/or gastrographin enemas may be curative in entities such as meconium ileus or hypoplastic left colon syndrome previously considered surgical conditions.

In any of these situations "prematurity" and "multiple" anomalies, both unfortunately common and having an adverse effect on prognosis, must be considered. Prematurity and its sequela in itself is a common cause of death. Louw,[9] in a series of neonatal surgical emergencies, reported an incidence of 50% prematurity as well as a 25% incidence of severe associated anomalies.

Diagnostic confirmation, although often obvious at birth, frequently requires some period of time to allow for the swallowing of air or the ingestion of formula before the onset of distress becomes obvious.[10] Even then a definitive diagnosis cannot be made until signs and symptoms indicate what steps should be taken immediately in order to prevent further deterioration while an accurate appraisal is being made.

What constitutes a surgical emergency? To the parent or nurse, irritability, failure to nurse well, evidence of discomfort, bleeding, obstipation or

Table IV
Danger Signals

A) Evidence of Respiratory Distress

1. Rapid respirations (greater than 40 per minute).
2. Labored Respirations (dyspnea) with retractions
3. Cyanosis
4. Apnea Episodes

B) Evidence of Intestinal Obstruction or Compromise

1. Excess Salivation
2. Distention
3. Bilious vomiting
4. Abdominal Mass
5. Constipation
6. G.I. bleeding
7. Jaundice (first 24 hours)
8. Signs of Peritoneal Irritation

constipation and abdominal distension lead to apprehension. To the physician, anything that may progress to perforation and peritonitis, evidence of aspiration, pneumonitis, sepsis, shock or hemorrhage confirm the apprehensions of the parents or the nurses.

It is important then to know what danger signals one should look for in assessing a potential problem. Early recognition includes anticipation of serious difficulties such as polyhydramnios, potential Rh incapatabilities and previous or associated anomalies. An initial careful evaluation of the child including a thorough physical examination helps considerably in observing the child thereafter for[11] lethargy, signs of respiratory distrucess — such as tachypnea, dyspnea and/or retractions, cyanosis or apnea; as well as signs of intestinal obstruction or compromise. These in clude excess salivation, abdominal distension, bilious vomiting, an abdominal mass, constipation (failure to pass meconium), gastrointestinal bleeding, jaundice, evidence of peritoneal irritation or roentgenographic evidence of pneumatosis intestinalis suggestive of necrotizing enterocolitis.

Once an "urgent" and/or "emergent" problem is suspected or recognized a careful protocol of management should be instituted as a routine to diminish the possibility of omitting important details and thereby offer the infant the best possible start on a successful course of management. This can be conveniently divided into three phases; a preoperative phase, an intra-operative phase and a post-operative phase.

I — Preoperative Phase

The emergency management of a distressed neonate quite often begins with a telephone call.[12] After all relevant details regarding the pregnancy, labor and delivery have been obtained, this phase of management can be further divided into four stages.

1-Stabilization

The first of these stages is that of "stabilization" of the infant, that is, when the infant is prepared for transportation to a referral center. This stage is primarily the responsibility of the referring physician coordinating the recommendations of the receiving physician.

However urgent the condition, it seems senseless to transport the infant if (s)he is going to die or deteriorate significantly in transit.[13] Specific therapy can be started before departure and continued throughout the transport procedure.[14] With proper management at this time, including endotracheal intubation if necessary, oxygen therapy if indicated and appropriate treatment of shock and possible hemopneumothroax, a seriously ill infant can be transported under optimal conditions. Ideally, a transport team available on short notice can be dispatched to the referring hospital to coordinate the stabilization and transport of the critically ill infant. During this manipulation it is of utmost importance to maintain the infant's body temperature.

2-Transportation to the Referral Center

Following appropriate definitive stabilization, the referring physician should then follow a definitive protocol for transporting the infant. This stage is again the responsibility of the referring physician coordinated with the advice of the receiving physician. (The transportation of neonates is a topic of itself as forms of transport vary from small, well-equipped portable units that fit into ground vehicles or aircraft to fully equipped mobile vans with complete intensive care facilities for the infant).

Absolutely nothing is to be given by mouth. Parenteral fluids are not recommended *unless* dehydration is severe, the distance to travel great or initial resuscitative measures during stabilization requires them. →

Table V

Preoperative Phase of Management

A) Stabilization
(Referring Physician)
(Prepare for Transportation, recognize and treat:)

1. Intubate if necessary
2. Treat Hemopneumothorax if present
3. Oxygen if necessary
4. Treat shock if present
5. Keep warm

B) Transportation
(Referring & Receiving Physician)

1. N.P.O. — IV's if dehydrated or or long trip
2. Nasogastric tube — aspirated frequently
3. Portable isolette — to maintain temperature — may also use celophane bags or warm blankets
4. Transport with head elevated
5. Send X-rays, sample maternal blood, consent for treatment

C) Resuscitation
(Receiving Physicians)

1. Complete physican examination with particular attention to respiratory, cardiovascular and metabolic aspects
2. Stabilize body temperature
3. Laboratory base lines
4. Roentgenographic base lines
5. Blood for typing and cross matching
6. Appropriate IV's

D) Preparation for surgery
(Receiving Team)

1. Alert operating room to:
   (i) Raise room temperature to 80 to 85 degrees Fahrenheit
   (ii) Have heating blanket
   (iii) Prepare appropriate instruments
   (iv) Warm irrigation and prepping solutions
2. Alert Anesthesia
3. Anesthesia and operating room personnel alert I.C.N. when ready
4. Team transport of infant and equipment in warm environment

A nasogastric tube should be inserted into the stomach (or blind pouch), secured in position and aspirated every 15 to 30 minutes during the journey with a syringe or other suction apparatus. It should never be clamped. Also, the mouth and pharynx should be aspirated as necessary with a bulb syringe.

A portable isolette is utilized for transport with the baby securely wrapped in warm blankets, cellophane bags, or other measures to maintain body temperature. Oxygen can be given if necessary and if the referring or transporting physician is capable of instituting it, continuous positive airway pressure (CPAP) can be utilized to a helpful degree.

The infant is transported with his head elevated to further ease respiratory excursion by reducing intra-abdominal visceral pressure on the diaphragm especially with small babies.

Antibiotics can be given if indicated; however, these are usually withheld until the infant arrives and has been appropriately assessed at the referral center. Appropriate x-rays, maternal blood samples, signed procedural consents and if possible, one or both of the infant's parents should accompany the child. A laryngoscope, infant endotracheal tubes, an ambu bag, a suction apparatus, and if possible a portable cardiac monitor with an oscilloscope read-out, are necessary accompaniments.

3-Assessment and Resuscitation

On arrival at the referral center, the receiving "team" assesses and restablizes the neonate with regard to body temperature and vital signs. Then a careful thorough evaluation is undertaken, combined with vigorous resuscitative measures. Special attention is given to the infant's respiratory, circulatory and metabolic statuses.

The nasogastric tube is connected to appropriate suction, necessary respiratory assistance is adjusted, appropriate base line laboratory parameters are obtained and evaluated, x-rays (including contrast studies) are performed, blood is drawn for transfusion purposes and appropriate IV's are instituted or adjusted accordingly. Umbilical or temporal artery catheters are placed (if not already present) as indicated.

4-Transportation to the Operating Room

Concurrent with the resuscitative procedures, measures are begun to institute stage four of the preoperative phase, "transportation to the operating room." The operating room is alerted well in advance that a neonatal surgical procedure is eminent. The room temperature is turned up to 80 to 85 degrees Fahrenheit, a heating blanket is

positioned and warmed, radiant heating lights are available for use, and appropriate instruments, blankets and solutions for prepping and irrigation are warmed.

An essential member of the operative team is a competent anesthesiologist, experienced and comfortable with the anesthetic management and supportive care of neonates. With the arrival of the infant at the referring center, along with alerting the operating room, the anesthesia team is alerted and their preparations begun.

The child is kept in the intensive care unit until both the operating room and anesthesia team are ready to receive the infant. A senior member of the surgical team then goes to the operating suite to confirm the readiness to receive the neonate, and at his direction, the infant leaves the intensive care unit.

Transport is in a warmed isolette or special transport unit under the direction of a member of the surgical team, the neonatology team and a member of the anesthesia team. Elevators are precoordinated for this and proper resuscitative equipment accompanies the move. At least one member of the team *must* be familiar with the intubation and assisted ventilation of infants of this size, for although circulatory failure and hypothermia are dreaded complications of any transport, compounding these problems with hypoxia is a catastrophe.

On reaching the operating room, the infant is placed on the warming blanket and phase two begins.

II — Intra-operative Phase

It is important to stress that the intra-operative phase is also a team approach — anesthesia, sugery and pediatric. It is necessary to see and understand the pathophysiology to comfortably and successfully manage it and diminish the frustrations and pitfalls which may result in unnecessary morbidity and mortality. There are three stages to this phase of management.

1 — Preparation for Induction of Anesthesia

The importance of maintaining body temperature cannot be over-emphasized; and heating pads, warmed blankets and radiant heat lights are important in this regard. In an air-conditioned operating room the child is transferred to the operating table, connected to cardiac, vascular and temperature monitors, the extremities are wrapped with webril padding, and IV lines are secured.

2 — Anesthesia and Operation

Emphasis is on maintaining the infant's temperature. Warmed prep solutions are used (a helpful maneuver in this regard is to utilize plasticized steri-drapes with sticky edges* to prevent the prep solution from running down the infant's underside, thereby promoting evaporative heat loss during the operation).

Warmed irrigation solutions are used during the procedure, fluid replacement solutions are idealy warmed, anesthetic gases are warmed and humidified to prevent heat loss from the respiratory tract, and given through a modified Jackson-Rees non-rebreathing apparatus, via an endotracheal tube if indicated, an internal diameter of 3.0 mm's is the usual size for infants less than three months of age, 3.5 mm's for those three to six months and 4.0 mm's for six to twelve months.[15]

Various anesthetic agents can be used, supplimented by appropriate local anesthetics when possible. When using local anesthetics, it is important to know the toxic dose of the local anesthetic used, for administration to small infants in voluminous amounts results in tragic circumstances.

Blood and fluid loss replacement is based on →

Table VI

Operative Phase of Management

A) Preparation for Induction of Anesthesia

1. Maintain warm baby
2. Cardiac monitor (E.C.G.)
3. Vascular monitor (Doppler)
4. Temperature monitor
5. IV's secured
6. Extremities wrapped

B) Anesthesia and Operation

1. Maintain warm baby
2. Warm irrigation solutions
3. Warm and humidify anesthetic gases
4. Warm replacement solutions

C) Emergence from Anesthesia

1. Maintain warm baby
2. Oxygenate
3. Suction
4. Alert I.C.N.
5. Coordinated team move from O.R. to I.C.N.

*Manufactured by Minnesota Mining and Manufacturing Co., 3M Center, St. Paul, Minnesota.

Table VII

Postoperative Management

Closely Monitored in

Intensive Care Nursery

1. Temperature (cutaneous)
2. Pulse, respirations, blood pressure
3. Arterial blood gases if needed (umbilical or temporal artery)
4. Input and output
5. Body weight
6. Hyperaliment if indicated

Table VIII

Factors Responsible for Hypothermia in Anesthetized Infants

1. Muscle relaxants
2. Chronic illness
3. Airconditioned operating rooms
4. Body weight and surface area
5. Duration of operation
6. Surgical field
7. Diathermy pads
8. Small children
9. Lack of appreciation by staff

maintenance fluids plus known calculated losses striving to maintain a blood volume of 90 ml per kilo or eight percent of body weight, and using blood itself only if losses exceed ten percent of estimated blood volume.[16]

Heat loss is accelerated during abdominal and/or thoracic procedures where viscera is exposed for lengthy periods. Such exposure is kept at the absolute minumum and frequent irrigations with warm solutions are utilized and helpful.

3 — Emergence from Anesthesia

Again, maintenance of body temperature is of utmost importance. The infant should be awake and responding to stimuli on the operating table. The frustrations of closing the wound of a "moving target" are overshadowed by the realization that a mobile responding baby signals the successful completion of a procedure.

Upon completion of the procedure, the infant is well oxygenated and suctioned, the intensive care unit is alerted, and coordinated team move from the operating room to the intensive care unit is undertaken.

III — Postoperative Phase

On reaching the intensive care unit, the neonate is again stabilized from a thermoregulatory and cardiorespiratory standpoint. Nursing staff, an integral and most important part of the team management, is instructed appropriately with regard to monitoring, what to expect, anticipate and record.

Monitoring complexity depends on the procedure and anticipated course, but central venous pressure, arterial pressures, and metabolic parameters can be watched closely as indicated. Many anomalies can be expected to have nutritional delays and complications, and the institution of intravenous nutrition, central or preferably peripherally can be started soon postoperatively.

It is only at this point that the "team" can relax. The post-operative care of a neonate represents a great challenge that must not be taken lightly. Seemingly trivial details demand routine attention, the margin for error is limited and easily exceeded if not closely followed.

A great deal of emphasis has been placed on the infant's thermal environment. We know that even the very small baby responds to cold stress with what is referred to as a "non-shivering thermoregulatory response"[17] but this metabolic response is limited and persistent cold exposure and hypothermia results in over extension of the neonate's ability to compensate.

Many factors can adversely influence the infant's thermoregulatory mechanism, so the obvious solution seems to be measures to prevent this from happening and this is the best done through a concentrated "team approach" to the awareness and management of the ill infant and his problems.

Some of the factors implicated as playing a part in the development of hypothermia have been muscle relaxants, chronic illness, air-conditioned operating rooms, body weight and surface area, duration of operation, surgical fields, diathermy pads, small children and lack of appreciation by the operating room staff.

The problem is more common in premature and low birth weight babies as well as babies in shock, hypoxic, hypoglycemic or infected. The resulting situation is characterized by lethargy, poor feeding and occasionally sclerema, and by respiratory depression, subsequent insufficiency and eventual death if unattended at any point in time during this management.

In general, hypothermia increases the morbidity and mortality significantly. Silverman et al[18] demonstrated a significant decrease in survival rate of babies that became hypothermic (regardless of weight) as well as an increased mortality rate, the lower the birth weight.

Surgery and anesthesia are severely traumatic

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Asthma: Some New Ideas About An Old Disease

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I. History

Asthma is an old disease. Over 2,000 years ago Hippocrates used the word asthma to describe its episodic shortness of breath. The word asthma is derived from ancient Greek, and means "panting."

In the second century A.D., another Greek, Galen, theorized that asthma was caused by the accumulation of superfluous thick secretions in the upper and lower respiratory tracts. However, he thought these secretions came down from the brain through conduits.[1]

As the disease is old, so, too, is its therapy. In the 7th century A.D., Paulus Aegineta's therapeutic approach included: 1. vinegar of Squills, cowparsnip, mustard, and round birthwort; 2. external applications of figs, honey, wax, flour of iris, and barley. Supplementary procedures included bleeding, purging, inducing vomiting, and administration of "clysters,"[2] or enemas.

The therapeutic approach of Cardano, a 16th century Milanese physician, included: strict diet, horseback riding, weekly shower baths and purging of the head through the nose to eliminate the noxious humors. He also forbade sleeping on a feather bed, and substituted linen for leather pillows. Supposedly, his patients did well.[1]

With the Renaissance, concepts of asthma began to change. Van Helmont, a student of Paracelsus, suffered from asthma, and wrote extensively about it. He discarded the Galenic concept of secretions from the brain, theorizing that asthma originated in the "pipes of the lungs." He associated asthma with seasonal changes, inhalation of irritants, and ingestion of particular foods. In 1698, the first comprehensive book on asthma was published, written by John Floyer.

Interestingly, at that time the purpose of respiration was not yet known; Floyer believed, along with most of his contemporaries, that the function of the inspired air was to cool the blood. In 1769, John Millar's observations on children with asthma—and no other complaints—were the first evidence that asthma was a definitive clinical disease.

Heberden, too, recognized that asthma could exist as a primary process, with his findings that "in examining the lungs of asthmatic persons after death, there has sometimes appeared no hurt obvious to the senses." Heberden's therapy included: Peruvian bark, mustard seed, quicksilver, cinnabar, garlic, squills, opium, smoking tobacco, and blood-letting.

By 1812, Corvisart, physician to Napoleon I, cautioned that the dyspnea of heart disease should not be confused with the dyspnea of asthma. In 1828, Chiarenti, an Italian physician, put a tube in his mouth, held his nose, and pumped into his lungs with a pair of bellows, thus inventing inhalation therapy. He concluded that this maneuver would cure asthma.

One of the earliest American writers on asthma was Professor Eberle of Jefferson Medical College, in 1830. His therapy included galvanism, with electrodes on the back of the neck and stomach.

In 1834, Laennec ushered in the modern era of the history of asthma, with his book *A Treatise on the Diseases of the Chest*. In it he defined asthma as a paroxysmal dyspnea occurring between two intervals of normal respiration, fairly accurate even by today's standards.[1]

II. Definition; Epidemiology

Asthma is difficult to define. Perhaps the most widely accepted definition of asthma is that of the American Thoracic Society Committee on Diagnostic Standards for Non-tuberculous Respiratory Diseases:

"Asthma is a disease characterized by an increased responsiveness of the trachea and bronchi to various stimuli and manifested by a widespread narrowing of the airways that changes in severity either spontaneously or as a result of therapy."[3]

Asthma is a common disease. In 1958 the U.S. National Health Survey revealed a prevalence of 2.3%, and asthma seems to be equally common in other countries.[4,5] The data from the National Health Survey in the United States in 1970 shows that approximately 3% of all persons surveyed reported by interview to be suffering from asthma. Obviously, these data depend completely on what the people call asthma. (Interestingly, asthma is more common in the South than in other regions of the United States.[6]) Thus, in 1970 U.S. vital statistics estimated 6 to 8 million asthmatics in the

general U.S. population of over 200 million.[7] Howell, in the Cecil-Loeb Textbook of Medicine, states that there is a higher prevalence of asthma in children.[8] However, this is not supported by the data in the 1970 U.S. National Health Survey, which shows a slightly higher prevalence in older people.

Symptoms Before Age 5

About 65% of children who have asthma develop symptoms before age 5. In childhood, asthma is more common in boys than in girls by almost a 2:1 ratio.[6,9] By adulthood, this difference disappears, and the prevalence is approximately equal in both sexes.[6,10] The asthma mortality in Rackemann's group of asthmatics was 2% for 20 years, or 0.1% annually. Similar mortality rates have been obtained in other studies in the U.S. and Scandinavia.

Asthmatics with recurrent episodes of status asthmaticus have an increased mortality rate, 3.3% annually in one study. But the true impact of asthma on patients is not as a cause of death, but rather on general impairment of the quality of their lives.[11]

III. Etiology; Pathogenesis

From an etiologic standpoint, asthma is a heterogeneous disease, with a multiplicity of causes.[12] These include: 1. allergy to inhaled antigens, such as pollen, animal danders; 2. respiratory infections; 3. psychological stress; 4. inhaled irritants, such as sulfur dioxide and other air pollutants — this can also include thermal inversions and stagnant air masses; 5. occupation-related factors, such as industrial chemical fumes; 6. heredity—that is, genetic predisposition to asthma.[13,14] It is important to note, however, that the common denominator underlying the asthmatic diathesis is a non-specific hyperirritability of the tracheo-bronchial tree — that is, "twitchy airways."[15]

The pathogenesis of asthma is unknown.[16] As is pointed out in Bates, Macklem, and Christie's *Respiratory Function in Deisease,* "the inter-relationship between clinical asthma and known mechanisms that affect tracheobronchial reactivity is far from being obvious or settled."[17]

Some Theories

However, there are a number of interesting theories, which are stimulating a great deal of research: first, the hypothesis that asthma is due to increased parasympathetic activity, usually expressed as a decrease in threshold to reflex bronchospasm, possibly with central influence; second, the idea that asthmatics have partial beta adrenergic blockade, proposing that normal circulating amounts of epinephrine are not effective in overcoming parasympathetic tone; third, the theory that there is a deficiency of beta adrenergic stimulators in asthmatics; fourth, release of histamine and slow-reacting substance of anaphylaxis from IgE-sensitized mast cells reacting with antigen. These hypotheses are not mutually exclusive; their synthesis awaits the future.[18]

IV. Immunopathology (Biochemical Mediators)

In their recent review article in *the New England Journal of Medicine* in September, Webb-Johnson and Andrews re-emphasize that serum levels of IgE are frequently elevated in patients with classical "allergic" asthma. The IgE antibody binds to the membrane of mast cells and basophils. When allergic patients encounter an allergen (that is, an antigen to which they are allergic, such as pollen or animal dander), antigen "bridging" of the IgE occurs. This "bridging" action leads to an influx of calcium ions into the cell, activation of proesterase, and selective release of chemical mediators from the mast cells.[19,20]

Bronchospasm is probably produced by the action on bronchial smooth muscle of the chemical mediators, which include primarily histamine, slow-reacting substance of anaphylaxis (SRS—A), eosinophil chemotactic factor of anaphylaxis (ECF—A), platelet activating factor (PAF), and, secondarily, possibly various kinins, prostaglandins, and perhaps serotonin.[21,22]

Some of the chemical mediators are pre-formed and stored in cytoplasmic granules (histamine, ECF—A), whereas others are synthesized and released during the allergic response (SRS—A, PAF).[23,24,25]

1. Histamine is found pre-formed, in association with mast cell granules. The mast cells themselves are in perivascular connective tissue. In experimental animals, histamine causes leaking venules and a profound increase in airway resistance, with a concomitant reduction in compliance. Interestingly, these effects can be ameliorated somewhat by pretreatment with atropine.[26,27] Arend Bouhuys demonstrated in 1960 that asthmatics are more sensitive to inhaled histamine than normals.[28]

2. ECF—A is also pre-formed; its activity seems to reside in two tetrapeptides. It selectively attracts eosinophils to the site of the reaction, and deactivates them. The eosinophils are found in the bronchial walls and in the tenacious mucus plugs in the bronchial lumens of asthmatic lungs. The well-known Charcot-Leyden crystals of asthma seem to be formed from crystalloids of granules of degenerated eosinophils.

3. SRS—A, an acidic sulfate ester, is not pre-formed. It appears in tissues or cells only after

immunologic activation and immediately before its release. Its generation seems to follow IgE-dependent reactions. Its actions are to increase vascular permeability and to constrict bronchial smooth muscle. It is not blocked by atropine.[29,30]

4. The role of PAF in bronchospasm is not yet known.[31] It may cause release of vasoactive amines and perhaps platelet factor 3, with contraction of bronchopulmonary smooth muscle and fibrin deposition.

5. NCF—A has recently been recognized, but purification is only now in progress.

6. The roles of the secondary mediators are as yet unclear. However, it is thought that the action of histamine and SRS—A on smooth muscle may result in the secondary elaboration of prostaglandins. These then amplify the bronchoconstrictor effects of histamine and SRS—A.[32,33] The synthesis and release of mediators is inhibited by cyclic AMP, which promotes mast cell stability.[34]

Thus, the immunologic release of primary mediators recruits diverse effectors—eosinophils, neutrophils, platelets—in a reaction sufficient to alter the response threshold of the irritant receptors. Many unanswered questions remain, however: how does an inhaled antigen penetrate tight intercellular bridges in lining epithelium to reach a submucosal mast cell to initiate the acute reaction? Also, how can it be explained that chemically and immunologically inert substances (such as charcoal dust) can induce changes in airways resistance in asthma?[35] The answers to these and other such questions await future research.

V. Pathology: Pathophysiology

The pathological findings in asthma provide insight into the disease. As McFadden and Austen point out, one of the most striking features of the lungs at autopsy is their failure to collapse when the pleural cavities are opened;[36] this hyperinflation of the lungs is due to air trapping behind plugs of mucus in the airways.[37] Numerous gelatinous plugs of viscid mucous exudate are evident in most of the bronchial branches, down to the terminal bronchiole.[38]

The pathologic role of mucus in asthma is obstruction of the airways. This can become very severe. The most common pathologic picture in status is almost complete bronchial obstruction by viscid mucus secretions.[39] Even in asymptomatic asthmatics who die of trauma or causes other than asthma, mucous casts and mucous plugs obstructing small peripheral airways are frequently found at post.[40,41] Bates points out that in patients dead from status, areas of atelectasis are seen in about one half of cases; he also notes that destructive emphysematous changes in the lungs are not seen more frequently in asthmatics than in the population at large.[42]

Finally, Sanerkin in the *Journal of Pathology* notes that a frequently observed change in the bronchial epithelium of patients with severe asthma is a profound desquamation so that cytologically the sputum contains "epithelial cell balls" (like popcorn balls), a combination of mucus, epithelial cells, and proteinaceous matter. They are called *Creola bodies.*[43]

The pathophysiologic hallmark in asthma is a reduction in airway diameter.[44] This is brought about by multiple abnormalities in airways during asthmatic attacks, which include: bronchial smooth muscle spasm, plugging with viscid mucus (as discussed above), obstruction from bronchial mucosal edema, basement membrane thickening, infiltration with eosinophils and chronic inflammatory cells, and vascular and lymphatic engorgement. The result of all this is an overdistended, hyperinflated lung (as noted above).[45]

Airflow Resistance

Narrowing of the airways leads to increased resistance to airflow through them. Resistance to airflow varies inversely to the fourth power of radius—thus, halving the radius of a bronchus increases the resistance to airflow 16-fold. This is Poiseuille's approximation. The rate of airflow within the tracheobronchial tree depends primarily on the degree of resistance to airflow—this is of crucial importance in the asthmatic patient because even small incremental decreases in airway caliber produce major changes in airway resistance, requiring increased energy expenditure to move air.[46]

Although asthma is considered to be primarily a disease of airways, nearly all aspects of pulmonary function are compromised during an acute attack.[47] The narrowing of the aiirways causes wheezing, and produces changes in the forced expiratory spirogram and flow-volume curve. In mild asthma and/or clinical remission between attacks, the only detectable abnormality may be in small airways (i.e., < 2mm diameter), which only comprise about 20% of total airway resistance[48] (because of proportionately large total cross sectional area).[49]

These subtle defects can only be detected by sensitive tests of small airway disease; the most readily available being the maximum mid-expiratory flow rate (MMFR) or FEF 25-75. As bronchospasm worsens, increasing obstruction produces progressive flattening of the forced expiration curve, a decrease in the forced expiratory volume at 1 second (FEV_1), and eventually a decreased force vital capacity (FVC)[50], leading to hyperinfla-

tion. Patchy alveolar obstruction leads to underventilation of some alveoli; but since perfusion remains relatively unchanged, ventilation-perfusion ratios (V/Q) are decreased, and hypoxemia occurs.

V/Q imbalance in asthma has been experimentally demonstrated by Malmborg[51] and, more recently, by Wilson et al in the *American Journal of Medicine,* using radioxenon and macroaggregated albumin.[52] As more bronchioles become obstructed, the V/Q ratio decreases further, and hypoxemia worsens. Eventually, total alveolar ventilation is insufficient to maintain a normal P_aCO_2. Then rising P_aCO_2 and respiratory acidosis occur. The acidosis and hypoxemia cause pulmonary artery vasoconstriction, with further worsening of V/Q ratios. Acidosis also blunts bronchiolar response to therapy with sympathomimetic amines. In addition, acidosis, hypoxemia, and hypercarbia may all cause potentially fatal cardiac arrhythmias. Thus, asthma can be divided into successive stages of secerity as hypoxemia worsens and P_aCO_2 rises.[53,54]

VI. Clinical Syndrome

The clinical syndrome of asthma, in its classical presentation, is familiar to almost all physicians. Sir William Osler's description of it in 1892 is still an apt one today: "(the patient) presents with a distressing sense of want of breath and a feeling of great oppression in the chest. Soon the respiratory efforts become violent, and all of the accessory muscles are brought into play. In a few minutes the patient is in a paroxysm of the most intense dyspnea."[55]

The textbook description of the clinical syndrome of asthma is of a classic triad of symptoms: dyspnea, cough, and wheezing, with wheezing often considered the *sine qua non.* However, as Regis McFadden points out in his article in the *New England Journal* in 1975, some patients with asthma do not present with wheezing, but rather with exertional dyspnea or cough. These seem to represent variant forms of the typical clinical syndrome of asthma. In the group of patients he studied, pulmonary function tests before and after therapy were characteristic of their more classical asthmatic disorder. The important conclusion that McFadden reaches in this paper is that bronchial asthma can take other forms that the clinical syndrome classically described.[56]

The severity of an acute asthmatic attack—that is, how severely is the patient's pulmonary function impaired—is difficult to assess clinically, especially on the basis of the severity of the classic symptoms of the traditional clinical syndrome. McFadden and his group looked at this in a paper in the *New England Journal* in 1973. They studied 22 patients with acute bronchospasm, and serially during therapy, and correlated lung mechanics (as measured by pulmonary function tests) with subjective complaints and physical findings.

They found that *only* the sign of sterno-cleido-mastoid retraction consistently identified those patients with severe impairment of their pulmonary functions tests—dyspnea and wheezing *did not.* The patients became asymptomatic at 40-50% of predicted normal pulmonary function tests for them. When they were "signfree," lung function was only 60-70% of predicted normal values.[57]

VII. Laboratory

As the foregoing implies, the laboratory is of critical importance in asthma. It is difficult to judge an acutely ill patient's ventilatory status on clinical grounds alone; the severity of the classical symptoms and signs cannot be relied on with any confidence. Cyanosis tends to be an unreliable sign. Therefore, arterial blood gases (ABG's) should be measured.[58]

Meaning To The Clinician

What, then, are the characteristic patterns of the arterial blood gases in acute asthma, and what is their meaning to the clinician? Interestingly, it was only as recently as 1967 that Tai and Read first measured ABGs in acute asthma, found important alterations, and reported their work in the *Lancet.*[59,60,61]

One year later, McFadden and Lyons studied the ABG's of 101 patients with acute asthma in 1968 and reported their findings in the *New England Journal.* They found that 91 of 101 patients were hypoxemic, and that 73 of 101 showed hypocarbia and respiratory alkalosis. The cause of the hypoxemia is thought to be altered ventilation -- perfusion ratios. The hypocarbia and respiratory alkalosis are secondary to alveolar hyperventilation.[62] Statistically, the finding of a normal pCO_2 in acute asthma tends to be associated with quite severe levels of obstruction as measured by pulmonary function tests,[63] and implies a decreased ability to hyperventilate.

McFadden and Lyons found CO_2 retention in 11 of 101 patients, and found that this occurred at extreme degrees of obstruction as measured by pulmonary function testing.[64] This increase in pCO_2 is due to alveolar hypoventilation. Although relatively rare, CO_2 retention, with its accompanying respiratory acidosis, carries a serious prognosis,[65] and may be an indication for intubation and mechanical ventilation.[66]

Pulmonary function tests in asthma reveal much what one would predict from the pathophysiology of the disease: increased airway resistance with decreased expiratory flow rates and decreased

forced expiratory volume at one second (FEV_1), air trapping with hyperinflation (increased residual volume, increased functional residual capacity, decreased vital capacity).[67] What is important to note is that diminution in pulmonary function tests in asthma is correlated with deterioration of the arterial blood gases. Hypoxemia and hypercarbia both become more common as airway obstruction (as measured by the FEV_1) becomes more pronounced.[68,69,70,71,72] Using both spirometry and ABG's, the severity of asthma can be assessed and staged, in terms of worsening of the FEV_1, worsening of hypoxemia, and changes (first fall, then rise) in the pCO_2.[73]

The Eosinophil Count

Another laboratory test of use in asthma is the total eosinophil count. Horn reported in the *New England Journal* in 1975 that total eosinophil counts in patients with asthma were significantly higher than in normals or steroid-treated asthmatics and were inversely related to FEV_1 and MMFR. Horn concludes that the eosinophil count reflects asthmatic activity and can be used to adjust corticosteroid treatment.[74]

Finally, the chest X-ray: Fraser and Pare point out that its primary importance in the patient with asthma is its usefulness in excluding other conditions associated with diffuse wheezing throughout the chest.

VIII. Diagnosis: Differential Diagnosis

As the above indicates, asthma is a diagnosis of exclusion, since other clinical entities can produce intermittent airway obstruction.[75] A new version of the old "asthma-wheeze" cliche reads: "Not all asthma produces wheezes, not all wheezes are due to classic asthma."[76] The differential diagnosis includes: acute bronchitis; chronic bronchitis; chronic obstructive pulmonary disease with bronchospasm; bronchiolitis; bronchiectasis; foreign body aspiration; lung neoplasia; tracheo-bronchial stenosis; "cardiac asthma", wheezing during left heart failure, pulmonary edema, or paroxysmal nocturnal dyspnea; lymphangitic carcinomatosis; carcinoid syndrome; polyarteritis nodosa; drug reactions; eosinophilic pneumonia; pulmonary thrombo-embolism, acute or recurrent; some chemical pneumonias; laryngeal stridor; hyperventilation syndrome; sarcoidosis.[77,78,79,80]

Pointing To Status

When asthma lasts many hours or days and is resistant to therapy, the diagnosis of status asthmaticus is made. Van Arsdel and Paul, in their recent review article in the *Annals of Internal Medicine,* list factors which may precipitate status or lead to its development. Among these are: respiratory infection; stopping steroid therapy; overuse of nebulized sympathomimetics; failure of physician or patient to recognize severity of an attack.[81] Those features of status boding a poor prognosis include: a "Silent Chest"; elevated pCO_2 and respiratory acidosis; arrhythmias and hypotension.[82] Scroggin et al recently reported in the *Journal of the American Medical Association* a retrospective analysis of 811 patients admitted to their hospital over a 9-year period with a diagnosis of status asthmaticus. 8 died; 19 required mechanical ventilation. All 8 deaths were in the 19 ventilator patients. 78 major complications occurred during mechanical ventilation, including pneumothorax and pneumonia. Mucus plugging was found in all autopsied patients.[83]

Finally, there are some interesting variant forms of asthma. Among these is so-called "New Orleans asthma," first reported by Lewis, Weill, and Ziskind in the early 1960s. Their studies in the New Orleans area showed a sharp increase in the incidence of asthmatic attacks and ER visits during certain periods of the year when atmospheric pollution increased. Increased levels of airborne pollen and mold spores also correlate well with attack rates. Their review revealed that the worst day on record was October 26, 1955, when 350 cases of asthma and 2 deaths were reported in 24 hours.[84,85,86,87]

IX. Therapy

A. General Measures

In the remainder of this paper, I will discuss the treatment of asthma. As Bates, Macklem and Christie note in *Respiratory Function in Disease,* in perhaps no other common disorder have so many therapeutic approaches been tired.[88] Over the years some of the more exotic of these have included removal of the carotid body, resection of local areas of bronchiectasis, and repair of hiatus hernias.[89] There are, however, some general measures which are widely accepted and used in the treatment of asthma. These include: (1) identification of offending allergens and avoidance or elimination of them;[90] (2) hydration with intravenous fluids: Van Arsdel and Paul, in their recent article in the *Annals of Internal Medicine,* contend that almost all patients are hypovolemic due to increased insensible water loss that occurs with prolonged hyperventilation, diuretic effect of some drug therapy for asthma, and poor oral intake, and they recommend generous fluid replacement.[91]

Hydration Is Dubious

McFadden and Austen argue that there is little evidence that hydration with intravenous fluids speeds recovery, but admit that it may prevent

CONTINUED ON PAGE 47

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hypohydration and through that prevent further inspissation of mucous plugs;[92] (3) expectorants and mucolytics: again, McFadden and Austen argue that there is little evidence that they add significantly to the treatment of asthma and note that mucolytic agents may actually produce bronchospasm.[93] Their use should probably be a last resort; (4) intermittent positive pressure breathing, or IPPB: Barach and Segal point out in their article in JAMA in 1975 that there is little evidence that IPPB offers any advantage for treatment of patients with asthma;[94] In fact, it may contribute to dangerous hyperinflation.[95] However, it may be psychologically helpful.[96] This is an interesting point.

Ganderia et al, in the *Lancet* in 1957, reported that although phenobarbital had no measurable bronchodilator effect by PFT's, when contrasted with other compounds it was preferred by most patients as the agent that had helped them more than any of the others used in the trial;[97] (5) sedation: this should be avoided because it has been related to increased morbidity and mortality; (6) oxygen: low flow oxygen can improve hypoxemia significantly, since one of the physiologic abnormalities in asthma is altered ventilation-perfusion ratios. It should always be humidified; (7) antibiotics: these should be used if there is evidence of bacterial infection;[98] (8) fiberoptic bronchoscopy: the data on its role is not yet in.

B. Biochemical mechanisms of anti-asthma drug actions.

In their excellent review article in the *Annals of Internal Medicine,* Van Arsdel and Paul note that the rationale for use of many anti-asthma drugs has been reinforced by results of research on the role of intracellular cyclic nucleotides in regulating biochemical and physiologic activity.[99] The following is a brief overview of some of that research and the light it sheds on anti-asthma drug therapy.

The enzyme adenyl cyclase catalyzes the formation of cyclic adenosine monophosphate (c-AMP) from adenosine triphosphate (ATP). These enzymes are associated with the cell membrane and can be activated by several drugs.[100] The activation of adenyl cyclase is brought about by stimulation of the beta-adrenergic receptor (which may, in fact, *be* adenyl cyclase) by sympathomimetic agents, and leads to the formation of c-AMP.

c-AMP acts as a "second messenger" in the cell (the "first messengers" being nervous impulses, hormones, and/or drugs) and acts in bronchial smooth muscle cells to cause relaxation.[101,102] It also acts in mast cells in inhibit the antigen-induced release of chemical mediators of asthma.[103] c-AMP is degraded to 5' adenosine monophosphate (5' AMP) by the cytoplasmic enzyme phosphodiesterease. Methylxanthines, particularly theophylline, inhibit the activity of this enzyme, and sustain any beneficial increase in c-AMP produced by beta-adrenergic stimulation. Thus, sympathomimetics and methylxanthines work synergistically to increase the concentration of c-AMP in the cell.[104,105]

The 'Second Messenger'

The activation of guanyl cyclase has opposite effects and is clinically detrimental in asthma.[106] Its activation leads to the formation of c-GMP-another "second messenger"—which acts in bronchial smooth muscle cells to cause constriction. Its concentration there is increased by vagal stimulation or cholinergic drugs, and it appears to be under control of the parasympathetic nervous system. Its effect is blocked by atropine and other anticholinergics.[107]

McFadden and Austen observe that in vitro data suggest that agents which decrease c-AMP or increase c-GMP facilitate chemical mediator generation and release. As noted above, the latter can occur following exposure of the system to acetylcholine. While unproven, this provides a rational basis for some portion of the efficacy of isoproterenol and aminophylline, and for the observation that beta-blockers and parasympathetic stimuli aggravate allergic disease of the airways.[108]

Thus, the resting state of bronchial smooth muscle seems to be regulated by a balance between c-AMP and c-GMP, and, through them, by a balance between sympathetic and parasympathetic stimuli.[109] This theory that biologic regulation may occur through opposing actions of these two cyclic nucleotides has been called the Yin Yang hypothesis, after the ancient Oriental concept which symbolizes a dualism between opposing natural forces.s.
natural forces.[110]

C. Sympathomimetics

Sympathomimetic agents are widely used in asthma. They stimulate alpha receptors (leading primarily to vasoconstriction), $beta_1$ receptors (leading primarily to tachycardia), and $beta_2$ receptors (causing bronchial smooth muscle relaxation and mast cell stabilization). They are thought to act through a beta-adrenergic receptor by activating adenyl cyclase and increasing intracellular c-AMP, as discussed above.[111]

Perhaps the best known of the sympathomimetics is epinephrine. It has alpha, $beta_1$, and $beta_2$ actions. It is inactive by mouth because it is metabolized by monoamine oxidase in the gastrointestinal tract, and it has a short duration of

action because it is rapidly taken up by sympathetic nerve endings. Refractoriness to it is common in respiratory or metabolic acidosis.

Primatene® and Bronkaid® are epinephrine in pressurized aerosol form. Isoproterenol has equal $beta_1$ and $beta_2$ actions; it has little or no hypertensive effect. It is used as an inhaled aerosol solution. Ephedrine, like epinephrine, has alpha, $beta_1$, and $beta_2$ effects. Unlike epinephrine, it has good oral absorption and a longer duration of action. It is not suitable for acute asthma, but rather for oral maintenance.

The drug orthoxine is similar to it. Bronkephrine is similar to, but only 1/10 as potent as isoproterenol. All these drugs have sympathomimetic side effects to a greater or lesser degree. These are primarily (1) cardiac, with tachycardia, arrhythmias, and hypertension, and (2) cerebral, with anxiety, tremor, and nervousness. Overdose can be treated by beta blockade with propranolol and/or phentol-amine for alpha blockade.[112] This is important because morbidity and mortality is increased in excessive users of aerosolized isoproterenol compounds.[113,114,115]

Beta Stimulants

The newer beta stimulant drugs are based on the catecholamine molecule, and their molecular configurations are similar.[116] Several of them are billed as selective $beta_2$ agents; however, while they are preferential for the $beta_2$ receptor, they are not exclusive for it.[117]

But, because they are relatively free of $beta_1$ activity, compared to some of the older drugs, they are, thus, safer to use in terms of cardiac toxicity,[118] and are probably preferred over isoproterenol or ephedrine for older or arrhythmia-prone patients.[119]

These drugs include: (1) metaproterenol; (2) iso-etharine, which is comparable to isoproterenol; and (3) terbutaline. Sackner et al compared the hemodynamic effects of terbutaline and epinephrine, and reported their findings in *Chest* in 1975. There appeared to be little difference except terbutaline had a longer duration of action.[120] Other preferential $beta_2$ drugs, including salbutamol, fenoterol, and carbuterol, are currently in use outside the U.S., or are under study here;[121] more will be heard of these in the future.

D. Methylxanthines

As noted above, the methylxanthines, particularly theophylline, are phosphodiesterase inhibitors. Since phosphodiesterase catalyzes the degradation of c-AMP, the action of the methylxanthines is to sustain any increase in c-AMP produced by beta-adrenergic stimulation, thus working synergistically with sympathomimetics.[104,105] The increase in intracellular c-AMP concentration causes bronchial smooth muscle cell relaxation and decreases bronchospasm.[101,102]

Theophylline is structurally related to caffeine. Aminophylline is the ethylene diamine salt of theophylline, and is 80% theophylline by weight. It is 20 times as soluble as theophylline.[122] There are various preparations of theophylline on the market, including aminophylline tablets, Choledyl®, Elixophyllin®, Marax®, Quibron®, Tedral®, and others.[123]

Theophylline has a low solubility and erratic gastrointestinal absorption. It also has a local irritative effect in the stomach, causing nausea, vomiting, and abdominal discomfort. However, high blood levels cause these same symptoms.[124] As an elixir, the alcohol base may increase the extent and speed of absorption of theophylline. The bronchodilator effects of theophylline increase with increasing plasma concentration, up to toxicity.[125]

In their classic paper in the *New England Journal of Medicine* in 1973, Mitenko and Ogilvie studied nine patients with asthma, giving them intravenous theophylline and measuring pulmonary function tests. They found improvement in the FEV_1 and vital capacity with plasma levels from 5-20 mg/1, and showed that a safe and effective dose of theophylline could be based on these observations. A 6mg/kg load over 10-20 minutes, followed by 1 mg/kg/hour maintenance gives a theophylline concentration 10 ± 5mg/1 in 95% of patients, and this will usually serve to recover some 30-40% of airway obstruction.

Thus, they showed that therapeutic effectiveness of theophylline correlates with plasma levels, which provides a rational basis for therapeutic recommendations. These data also apply to therapy with oral and rectal agents.[126] The loading dose over 10-20 minutes is essential for rapid effect, because the maintenance dose takes some time to achieve definite therapeutic levels. The usual therapeutic range is 10-20 ug/ml (or mg/1), because at levels > 20, side effects are common, and at levels < 10, therapy is often ineffective.

Regulating Dosage

Plasma levels of theophylline can be useful in regulating dosage in patients difficult to control and in preventing side effects of high levels. The normal half-life of theophylline in adults is 4.5 hours (range 3-9); in children, 3.6 hours (range 1.5-9).

Obviously, some patients deviate markedly from the mean in their theophylline half-life. Theophylline is metabolized in the liver.[127] Piafsky et al showed in the *New England Journal of Medicine* in 1975 that in cirrhosis there is a variable capacity to eliminate theophylline.[128] It has since been shown

that other liver disease and congestive heart failure, with chronic passive congestion of the liver, will increase the plasma half-life of the drug; thus, the maintenance dose should be reduced in such cases, after the usual loading dose.[129]

An excellent nomogram for calculating theophylline dosages can be found in Jusko's recent article in the *Annals of Internal Medicine* in 1977.[130] In the normal patient, oral theophylline preparations should be given every 4-6 hours to maintain therapeutic plasma levels.[131]

In addition to gastrointestinal side effects, the other main side effect of the methylxanthines is excitation of the central nervous system.[132] Sutton et al reported in the *Annals of Internal Medicine* in 1975 that grand mal seizures were observed to complicate intravenous theophylline therapy when the serum levels were 25 ug/ml or greater.[133] In addition, with high plasma levels, the xanthines can produce tachyarrhythmias and even ventricular fibrillation.

E. Corticosteroids

As Webb-Johnson and Andrews point out in their recent excellent review article in the *New England Journal of Medicine,* "corticosteroids have been used to treat asthma for over 25 years. Yet their exact modes of action in asthma remain unclear, their role in asthma treatment is controversial, and optimal dosage schedules are disputed."[153]

Cayton, writing in *Thorax,* concurs: "The use of corticosteroids in asthma remains ill-defined."[154] The actions of corticosteroids in improving asthmatic obstruction are probably multiple. They cause bronchial vasoconstriction and decreased capillary permeability, bronchial smooth muscle relaxation, and decreased mucosal edema.

They also inhibit penetration of basement membranes by antigen-antibody complexes. They cause reduction in the number of circulating eosinophils. They may prevent reaccumulation of histamine granules in mast cells. They reduce leukocyte endothelial sticking and diapedesis through capillary walls, thus reducing the number and activity of inflammatory cells in the bronchial submucosa.[155,156] The long-held belief that corticosteroids act by stabilizing lysozomal membranes probably does not hold true in vivo. They may enhance the effect of beta-adrenergic drugs on c-AMP production,[157] by increasing adenyl cyclase activity and decreasing phosphodiesterase activity.[158]

Corticosteroid Side Effects

Some patients need continuous oral corticosteroid therapy for their asthma, and are subject to the side effects of long-term corticosteroid therapy. These include: osteoporosis, purpura, diabetes, hypertension, weight gain, cataracts, muscle wasting, edema, electrolyte changes, emotional problems, adrenal suppression, and—in children—growth retardation.[159,160]

At maintenance dosease of 10 mg of prednisone per day or less, these side effects are uncommon. Prednisone (or prednisolone) is the standard drug used for oral therapy. Other oral corticosteroids have no significant advantage and are more expensive.[161]

Recently, inhaled corticosteroids have become available for use in asthma. Water-soluble steroids, when inhaled in effective doses, cause adrenal suppression because approximately 70% of the dose is swallowed and absorbed from the gastrointestinal tract. However, lipid-soluble steroids, developed originally for dermatologic use, are poorly absorbed when swallowed.[162]

Thus, these lipid-soluble inhaled steroids can deliver corticosteroid topically with minimal systemic absorption and few side effects. Several controlled trials have shown that one of these new agents, beclomethasone dipropionate aerosol (marketed in the U.S. as Vanceril®), is as effective as oral prednisone in controlling symptoms in mild to moderate asthmatic patients who require long-term corticosteroid therapy;[163,164,165,166] and one of these controlled trials showed that chronic use of beclomethasone from 9 months to 2 years did not result in adrenal suppression.[167]

Dramatic Reduction

Thus, beclomethasone 100 ug (2 puffs) q.i.d. can allow a dramatic reduction in oral steroid dosage in most steroid-dependent asthmatics.[168] A few patients require larger doses. So far, oropharyngeal candida or aspergillus infection has been the only direct side effect. It should be emphasized that inhaled steroids are for maintenance therapy, and are not effective for relief of acute asthma attacks.[169] It should also be emphasized that in starting aerosol steroid therapy, oral doses of steroids must be reduced slowly and cautiously (at least 1-2 weeks of combined full dose therapy). Then the aerosol dose should be maintained, and the oral dose reduced slowly, perhaps 2.5 mg/week, to the lowest level (0 if possible) to control symptoms.[170]

What about intravenous steroids in severe asthma or status asthmaticus? As noted above, recommended dosages, frequencies of administration, and reported efficacies vary widely.[171] Also, plasma cortisol levels have not been shown to be useful as a guide to therapy,[172] though there is some disagreement on this point.[173]

Franklin, in his article in the *New England Journal of Medicine* in 1974, suggests that pre-

dnisolone is safer than hydrocortisone because it causes less sodium retention.

Newer steroids, though more potent on a weight basis, have no real advantage over and are more expensive then prednisolone. Except in cases of so-called "steroid resistance," it is not clear that more rapid resolution of bronchospasm results if doses in excess of 60-80 mg/day of prednisolone are given. Thus, Franklin recommends 15-20 mg/day of prednisone or prednisolone IV q 6 hours. In the occasional patient who fails to improve on that regimen, who is said to be "steroid resistant," Franklin suggests that the dose of steroid should be doubled until a response is obtained.[174]

Phenobarbital Risks

It should be remembered that steroids do not have immediate benefit in asthma, but rather that their benefits are delayed for some 6-12 hours.[175-176] Also, caution is advised in prescribing phenobarbital to asthmatics on steroids, since the barbiturate stimulates hepatic enzymes, causing more rapid metabolism of the corticosteroids, thus lessening their physiologic activity.[177]

Barbituates can also produce dangerous respiratory depression in patients with hypercarbia.[178]

Following an acute attack, for initial chronic maintenance, Webb-Johnson and Andrews recommend prednisone 15-40 mg the first day, tapered by 2.5-5.0 mg per day or q.o.d. Later, they suggest a single dose, equivalent to the total maintenance dose for 48 hours, given on alternate mornings to minimize adrenal suppression.[179]

However, even with alternate day therapy, there is some suppression of the adrenals.[180] Thus, as soon as possible, this patient should be tried on inhaled steroids.

F. Cromolyn sodium (disodium cromoglycate)

Cromolyn sodium is not a bronchodilator. Its only use is prophylactic, not in the acute asthmatic attack. It has no anti-inflammatory or anti-histamine action; it is thought to act by stabilizing the mast-cell membrane and preventing release of chemical mediators from the sensitized mast cell.[135]

It has a highly selective action in blocking bronchospasm produced by antigens or exercise, and it is most effective in young patients with allergic asthma or exercise-induced asthma. It is less effective in older patients.[136,137,138,139] It must be taken daily without interruption, and is expensive—approximately $20-$30/month. It is ineffective by mouth; the dose is 20mg via inhaler q.i.d.[140,141]

G. New Directions in Therapy

One new direction in treatment for asthma is anticholinergic therapy. Interestingly, anticholinergic therapy for asthma has a long history — including burning stramonium leaves and breathing the smoke, and smoking atropine cigarettes. The rationale for this therapy is as follows: regulation of bronchial smooth muscle tone is partly under parasympathetic control via the vagus nerve; cholinergic drugs increase the concentration of c-GMP and enhance antigen-induced release of mediators from isolated sensitized lung tissue; atropine and other anticholinergics have an opposite and protective effect.[142] Anticholinergics relax bronchial smooth muscle; however, they also tend to dry out respiratory mucous membranes and to reduce muco-ciliary clearance by increasing sputum viscosity.[143]

Tinkelman et al, in controlled trials reported in the *American Review of Respiratory Disease* in 1976, did not confirm the suspected deleterious effect of atropine on sputum viscosity. However, they did confirm that atropine does inhibit muco-ciliary transport.[144] Aerosol SCH 1000, ipratropium bromide, an isopropyl-substituted derivative of atropine, has little drying effect and does not alter muco-ciliary transport.[145] It is an effective bronchodilator in both chronic bronchitis and asthma, and it may be useful in the occasional steroid-dependent patients who are refractory to beta-adrenergies.[146,147]

New Directions

Other new directions in asthma therapy include: (1) troleandomycin, a broad-spectrum macrolide antibiotic, may be useful for steroid-sparing effects in a few patients with severe asthma;[148] (2) prostaglandins E_1 and E_2 are bronchodilators. They are investigational, and are undergoing controlled clinical trials. They are inhaled, and their usefulness may be limited by the frequent occurrence of pharyngeal and bronchial irritation;[149,150] (3) alpha-adrenergic blocking agents—phentolamine has been shown to improve asthma in a double-blind study by Gross et al, reported in *Chest* in 1974;[151] (4) both smoked marijuana and oral tetrahydrocannabinol have been shown to cause significant bronchodilation in double-blind crossover trials.[152] All these therapies await further research.

Summary

I have tried to present an overview of asthma, with an emphasis on new ideas about pathophysiology, immunopathology, and therapy. ●

References On Request

CONTINUED FROM PAGE 25

• Asthma sufferers were benefiting in the fall from two new drugs that have been available in Europe for many years, but only this year were licensed for use in the United States. The two drugs have proved highly effective in relieving asthma attacks. The drugs are beclomethasone dipropionate and cromolyn sodium.

• The AMA published a new edition of its book on blood transfusions, the major change being a strong recommendation that transfusions be of red blood cells only, rather than whole blood, to reduce risk to the patient.

• A Houston surgical team reported that they had performed cardiovascular operations on more than 500 Jehovah's Witnesses without using blood transfusions. The procedure worked well and the doctors concluded that patients who refuse blood transfusions for religious reasons can undergo major cardiovascular operations with an acceptably low risk.

• Exploding pop bottles were added to the hazards of everyday living in another JAMA report this fall. More than 30,000 people are injured each year by pop bottles, the report said. Research was underway at year's end to cope with the problem.

• A new and revised edition of the AMA's manual on alcoholism indicates that real progress is being made in mobilizing the nation to deal with alcoholism. There is growing awareness that alcoholism is an illness. Meantime, a Canadian report in the AMA's Archives of Internal Medicine found that alcoholism is much more damaging to women than to men.

• A new treatment for hyaline membrane disease—a serious disorder in premature newborns—has made possible a substantial decrease in severe breathing problems and death in premature newborns. It involves administration of plasminogen—a substance in human blood—within 60 minutes of birth. Meantime, other studies found that amniocentesis properly performed is safe and useful to identify potential defects well before birth. Amniocentesis is a process in which the doctor extracts with a needle and syringe a small amount of the fluid that surrounds the fetus, for examination in the laboratory.

From Sweden

• The search for a treatment for acne, the plague of adolescents, got a boost during 1977 with a report from Sweden that zinc tablets are sometime effective against the skin problem.

• A new four-drug combination treatment for advanced Hodgkin Disease has proved effective against some cases that had previously defied other drug treatments. Hodgkin Disease affects the lymph nodes in the neck. Untreated, it spreads and causes death. The new treatment is known as BVDS, for the first letter of the name of each drug used.

• A research group in Pennsylvania has gained initial success with an experimental vaccine against gonorrhea. Further tests are under way. Gonorrhea has grown in magnitude until it is a major communicable disease, infecting some 10 million persons a year in the United States.

• Debates continued among scientists as to whether food additives cause hyperactivity in children. A report at mid-year from Wisconsin found no evidence to support the theory that first originated in California.

• A furor occurred following a report that 53 women apparently had breasts removed needlessly because of misdiagnosis. Later in the year it was determined that almost all of those who had breasts removed actually did have cancer. ●

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JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
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DIGEST—STATE COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting of December 21, 1977:

- Approved the declaration of abandonment of a burial ground with provisions that the applicant comply with all State Statutes.
- Was advised of legal action safeguarding public water supplies for five local water systems.
- Promulgated an amendment to the milk regulations redefining low-fat milk in compliance with federal standards and levels permitted in neighboring states to the level of ½% butterfat.
- Amended the 1977 Alabama Medical Facilities Plan to permit an addition of 55 beds sponsored by the Methodist Church in Lee County.
- Revised the 1977 Medical Facilities Plan to authorize a total of 226 nursing home beds (206 SNF, 20 ICF) in Alabaster with provisions that this be operated as one facility.
- Approved revision of the procedures manual for the Certificate of Need in compliance with federal requirements.
- Approved the initial issuance of Assurance of Need for 17 facilities.
- Approved an extension of Assurance of Need for Monroe County Hospital, Monroeville.
- Gave favorable recommendations and approval to an application from Huntsville Hospital, Huntsville, for construction and renovation of their hospital facility.
- Approved a Certificate of Need for Wesley Terrace, Auburn, as authorized earlier in the 1977 Plan change.
- Approved emergency medical services I.V. Fluid/Drug Supply, Resupply applications for seven facilities.
- Approved the State Health Needs and Priorities for the State Health Plan for 1979.
- Received for one-month's study a preliminary State Health Plan for 1978.
- Approved a policy that medical records from hospitals that close should be disposed of at the direction of a court of appropriate jurisdiction.
- Concurred in the approval of the State Personnel Board Policies, Recommendations and Regulations governing state and local health departments.
- Authorized a public hearing to initiate inclusion of Cyclohexamine and its compounds and derivatives (Angel Dust) to the Controlled Substance List.
- Approved five proposed bills for introduction into the next regular session of the Legislature.
- Included mumps in the listing of the diseases requiring immunization prior to school entry.
- Received the 1976 Alabama Tuberculosis Program Report and the Annual Report of the Department of Public Health for 1976.
- Was advised of an order opening certain oyster beds on the Baldwin County side of Mobile Bay effective December 20, 1977.
- Received for study proposed changes in the Radiological Health Regulations. ●

Management of the Distressed Neonate: Surgical Considerations CONTINUED FROM PAGE 38

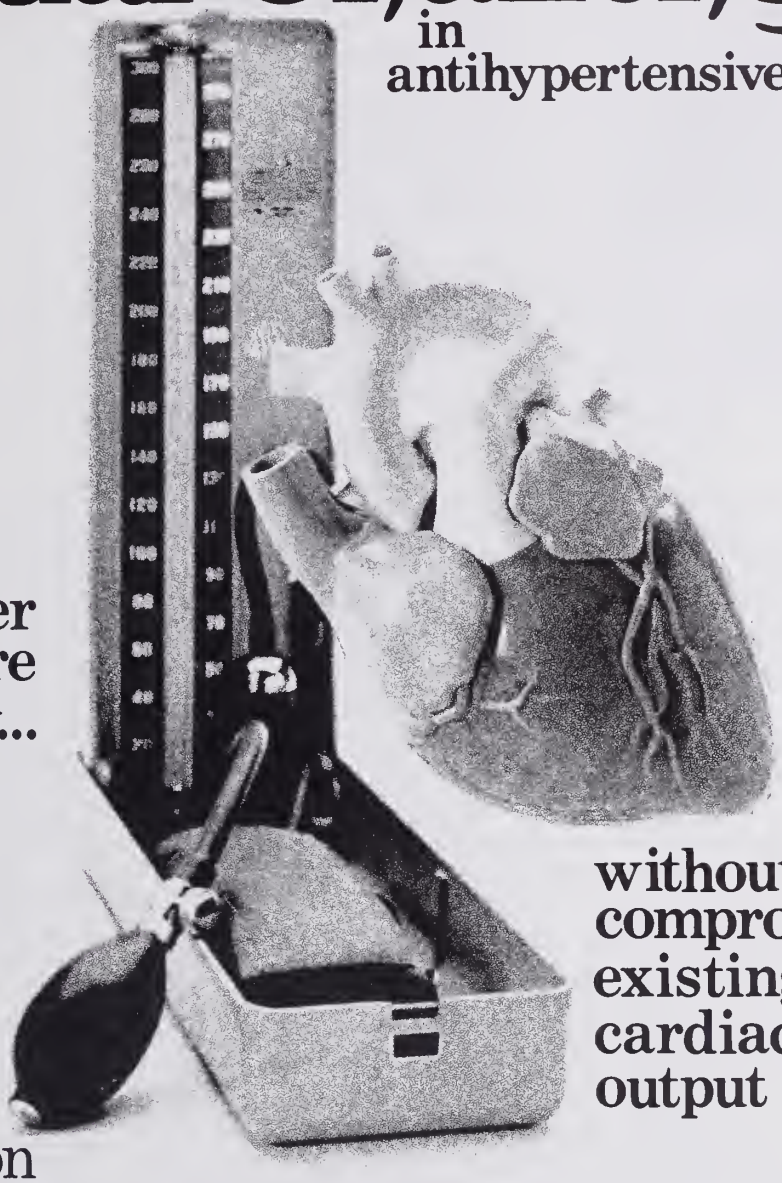
insults to a baby's homeostatic mechanisms, and despite what we do to them out of necessity they are still able to respond, rebound and survive functionally intact physiologically and psychologically provided a relatively stringent protocol is followed. At this time, when our expertise has allowed us to salvage smaller and more immature infants with potentially greater liability to morbidity and mortality, a coordinated team approach as outlined is absolutely essential to produce an acceptable result both physiologically and mentally. ●

REFERENCES

1. Done, A.K.: Drugs of Choice. Modell, W., ed. St. Louis, 1966-1967.
2. Buntain, W. L., Lynn, H. B., Cloutier, M.D., and Dawson, B.: Management of the Pediatric Surgical Patient. Mayo Clinic Proceedings, 47:654, 1972.
3. Duhring, J. L.: The High Risk Fetus. Hosp. Med., 10:81 - 89, 1974 (May).
4. Louw, J. H.: Surgery in the newborn. S. Afr. Med. J.; 34:686-695, 1960.
5. Lynn, H. B.: Neonoperative considerations in pediatric surgery. J. Med. Assoc. State of Ala. 32:201-208, 1963.
6. Eraklis, A. J.: Abdominal Injuries Related to Trauma of Birth. Pediatrics, 39:421, 1967.
7. Firor, H. V.: Omphalocele — an appraisal of therapeutic approaches. Surgery 69:208, 1971.
8. Holcomb, G. W.: Omphalocele. Amer. J. Surg. 101:598-604, May, 1961.
9. Louw, J. H.: Surgery in the newborn. S. Afr. Med. J. 34:707-713, 1960.
10. Mustard, W. T., Rairtch, M. M., Snyder, W. H., Jr. et al: Pediatric Surgery. Second edition. Chicago, Year Book Medical Publishers, Inc., 1969.
11. Clatworthy, H. W., Jr., and Grosfeld, J. L.: Danger Signals in the Newborn. Hospital Med., 9:60-83, 1973 (May).
12. Lynn, H. B., and van Heerden, J. A.: Neonatal intestinal obstruction: the challenge of minutiae. Surg. Clin. N. Amer. 49:959-966, 1969.
13. Rickham, P. P., Soper, R. T. and Stauffer, U. G. Synopsis of Pediatric Surgery, First Edition, Chicago, Year Book Medical Publishers, Inc. Georg. Thieme Publishers, 1975.
14. Cunningham, M.D. and Smith, F. R.: Stabilization and transport of severely ill infants. Ped. Clin. North Amer. 20:359-366, 1973.
15. Dawson, B. and Lynn, H. B.: The pediatric patient in the operating room. Surg. Clin. North Amer. 45:949-959, 1965.
16. Bennett, E. J.: Fluids for anesthesia and surgery in the newborn and the infant. First Edition, Charles C. Thomas, Publisher, Springfield, Illinois, 1975.
17. Dawkins, M.J.R. and Scopes, J. W.: Nonshivering thermogenesis and brown adipose tissue in the human newborn infant. Nature, 206:201, 1965.
18. Silverman, W. A., Fertig, J. W. and Berger, A.P.: The influence of the thermal environment upon the survival of newly born premature infants. Pediatrics 22::876-885, 1958.

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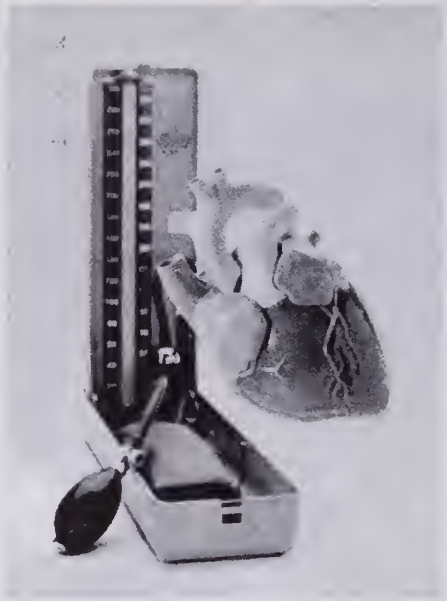
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Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, occasionally with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Pregnancy and Nursing: Use of any drug in women who are or may become pregnant or intend to nurse requires that anticipated benefits be weighed against possible risks; possibility of fetal injury or injury to a nursing infant cannot be excluded. Methyldopa crosses the placental barrier, appears in cord blood, and appears in breast milk.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: urinary uric acid by the phosphotungstate method, serum creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia. Positive tests for antinuclear antibody, LE cells, and rheumatoid factor.

Allergic: Drug-related fever, lupus-like syndrome, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third months of therapy; increased dosage or adding a diuretic frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 500.

For more detailed information, consult your MSD representative or see full prescribing information.
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NEW YEAR'S RESOLUTION—AMPAC & ALAPAC

By the time you read this message, many of you will have made New Year resolutions—some that have been kept, some broken, some forgotten.

Included in these resolutions and kept, I hope, was your intent to join ALAPAC ($50 on your Medical Society statement, plus $10. for your wife's/husband's membership, paid by personal check). Ten dollars in your ALAPAC dues go to AMPAC or you may send $50 more for sustaining membership.

Why join? Because this is an election year for all state and some national offices. Who you help to elect may determine who *plans for your future.*

After reading "All I want to know and more," about some of the nonprofit health planning agencies appearing on the scene, the need for our involvement is clear. In the fall issue of the AMA Auxiliary's *Facet's* (New Views by Betty Sutter), which goes to every Auxiliary member, are the following two brief, but important thoughts on health planning and controls:

"Planning is not a dirty word, but the politics of health planning can be. There are three parties to what operation—physician, politican, and planner.

"The physician is a busy person dealing with day-to-day, even moment-to-moment, crises. Though he should be involved in the important work of planning, since his professional future depends on it, the important yields to the urgent. He takes care of patients—and he relegates planning to the professional planner.

"The politician is also a busy person, but he must make decisions about health care matters without firsthand, in-depth knowledge of the health system itself. Health care matters are but one area crying for his time and attention. So the politician delegates information gathering and recommendation making to the professional planner.

"With this relegated and delegated power, the planner moves ahead. Unlike the physician, he lacks knowledge of the unquantifiable intricacies of health care systems. He is an expert who knows the cost, but not the value of things. Unlike the politican, the planner has no constituency and hence no accountability. His "proposals" can be adopted, but he never has to account for them or live with them if they fail.

"Health planning, on the local and regional level, is being done by Health Systems Agencies, which by law must be composed of 60% 'consumers.' Shouldn't doctors and their families seek representation on these HSAs, as frustrating as they are, to help decide what tomorrow's health care system will be?"

Also, from *Facets,* a word about Chaos:

" 'We have created a system of regulatory chaos' in the health field, asserted Senator Edward Kennedy, Democrat of Massachusetts. 'We legislate and regulate with the control of the month. We try out one control; when it doesn't work fast enough, we add another one.' The resulting regulation, said Kennedy, 'is piecemeal, fragmented, and conflicting.'

"From a senator who played a major role in enacting much of this control legislation, the remarks would appear to be a *mea culpa.* But Kennedy made the statements in pushing the case for his federalized medical system proposal—the Health Security Act—which he claimed would 'bring order to that chaos.'

''The lawmaker's strong words about the existing health setup in government evinced a growing concern in Congress and the administration about the way health is handled at the federal level."

Need I stress political involvement more? Please do join ALAPAC and AMPAC!

Helene

MRS. JOHN S. TAYLOR

PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

DERMATOLOGY: Age 28; University of Alabama, 1974; seeking practice in town of 30,000 plus population. Available July 1978. LW-001.

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board eligible 1978; National Board; Available July 1, 1978. LW-004.

FAMILY PRACTICE: Age 30, Duke University 1968, interested in working with a faamily practice, general practice, or emergency room physician while serving a straight internal medicine internship at University of Alabama Hospitals in Birmingham during the period July 1977-June 1978. LW-005.

FAMILY PRACTICE: Age 26; University of Tennessee, 1974; American Board certified; National Board; will be American Board eligible 1978; seeking practice in town of 5,000-50,000 population. Available February 1978. LW-006.

FAMILY PRACTICE: Age 31; University of Alabama, 1974; National Board; interested in practicing in a medium to small town with high physician needs. Available immediately. LW-016.

FAMILY PRACTICE: Age 28; Washington University, 1975; seeking practice in town of 15,000 plus population near Gulf Coast. American Board eligible; National Board. Available July 1978. LW-017

GASTROENTEROLOGY/INTERNAL Medicine: Age 29; Medical College of Georgia, 1973; National Board certified, American Board certified and passed Flex Examination; seeking partnership, multi-specialty group, single specialty group, Institutionally based or research. Available July 1978. LW-06624.

GENERAL PRACTICE: Age 35; University of Alabama, 1975; seeking practice in northern or central Alabama in town of 50,000 or more population. Available April 1978. LW-002.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; Presently in the army completing a two year obligation, (wife is also a Board eligible Internist and is presently completing an infectious disease fellowship.) Wish to join a small group in general internal medicine preferably a small city with rural surroundings. Available August 1978. LW-018. (See LW-019.)

INTERNAL MEDICINE/RHEUMATOLOGY: Age 31; Ohio State University, 19722; American Board certified; American Board eligible; seeking single specialty group, institutional based or multi-specialty group. Available July 1978. LW-09159.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 30; University of Louisville 1973; seeking clinical practice. Available July 1978. LW-007.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; seeking practice in general internal medicine with a small group, preferably a small city rural surroundings. Available July 1978. LW-019. (See LW-018.)

OPHTHALMOLOGY: Age 30; University of Illinois, 1972; American Board certified; National Board; seeking single specialty group, assistant or associate in the Birmingham or Huntsville area or with a town of 100,000-250,000 population. Available July 1978. LW-010.

ORTHOPEDIC SURGERY: Age 32; Medical College of Georgia, 1971; will be American Board eligible 1978; seeking single specialty group, partnership, industrial or institutionally based, or solo. Available January 1978. LW-06158.

ORTHOPEDIC SURGERY: Age 32; University of Texas, 71; seeking practice in town of 25,000-30,000 population. Available July 1978. LW-015.

OTOLARYNGOLOGY: Age 30; Ohio State University, 73; Will be American Board eligible 1978; seeking assistant or associate practice in town of 30,000-100,000 population. Available July 1978. LW-012.

PEDIATRIC HEMATOLOGY/ONCOLOGY: Age 28; University of Michigan, 73; American Board certified; National Board certified; seeking practice in Birmingham. Available July 1978. LW-013.

SOPHOMORE medical student—age 22, interested in a town or hospital assiting with medical school costs in return for service there in general/family practice. Available 1980. LW-01.

SURGERY: Age 32; Washington University, 1971; American Board eligible; seeking partnership, single specialty group or multi-specialty group. Available July 1978. LW-09077.

SURGERY: Age 31; University of Alabama, 1973; National Board certified; will be American Board eligible 1978; seeking partnership, single specialty group, solo or multi-specialty group. Available July 1978. LW-07827.

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

PHYSICIANS WANTED
(Opportunities for Practice)

ALL SPECIALTIES—urban and rural Alabama private practice opportunities including Assistant Prof. Community Health, $40,000 guarantee, moving, other fringes. PW-17.

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and

larger cities contains a progressive 74 bed hospital. Ample opportunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital privileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

GENERAL PRACTITIONER'S 2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-5

GENERAL PRACTITIONER—Opportunity in central Alabama town of 4500 population. Within 17 miles north of Montgomery, Alabama. The finest recreational areas in Alabama consisting of 2 large lakes. Newly expanded 69 bed hospital with 8 active staff members. Invitation to visit with expenses paid will be directed to those qualified. PW-9.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER Wanted—Town of 6,000 population, trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities include golf course, country clubs, tennis courts. PW-7

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14

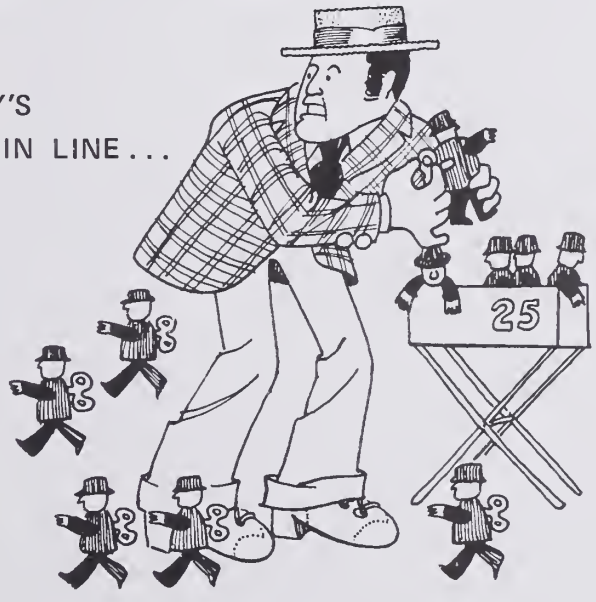
OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16. ●

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MEDICAL OFFICE for lease in Tuscaloosa, with or without equipment. Building is 1½ years old, 1650 square feet, four examination rooms, large reception room; one unit of four-office complex; two medical offices, two dental offices. Fully equipped, if desired, for instant practice; equipment purchase optional. Ten blocks from Druid City Hospital. Separate equipment sale negotiable. Inventory available. Contact: Paul D. Nelson, D.M.D., 601-A Hargrove Road East, Tuscaloosa. Phone (205) 345-7134.

POSITIONS AVAILABLE

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to $40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 487, Carrollton, Alabama 35447, or call Frank Cochran COLLECT 367-8138, evening hours 553-2198.

VACANCY ANTICIPATED early 1978 for experienced board-certified Internist as Chief, Medical Service, and for Internist for position of Staff Physician of this 206 bed general medical and surgical Veterans Administration Hospital, Montgomery, Ala. The hospital has ICU, RCU, Pulmonary Function Lab, a good medical library, excellent facilities, and is affiliated thru regionalization with the Medical College of the University of Alabama. Salary commensurate with qualifications as determined by a Professional Standards Board, plus special VA Physicians bonus. Excellent fringe benefits include retirement, sick and annual leave, health and life insurance, as well as mal-practice coverage. U.S. Licensure (any state) required. English language proficiency is required in accordance with Public Law 95-201, Veterans Administration Physicians and Dentist Pay Comparability Act of 1977. Travel and moving expenses will be paid. The VA is an equal opportunity employer. Contact the Chief of Staff, VA Hospital, 215 Perry Hill Road, Montgomery, Ala. 36109. Telephone (205) 272-4670, ext. 202.

INTERNAL MEDICINE—Excellent opportunity for both hospital and private practice in a thriving East Alabama community. JCAH accreditated, full-service general hospital of 238 beds will guarantee minimum yearly income of $65,000 for EKG interpretations. Office space available in new 4-story Doctors Building opening in early Spring 1978. Bi-City population of nearly 200,000. Enjoy surburban living with big city conveniences. Excellent schools, churches, recreational facilities. Expenses paid invitation extended to those qualified.

PUBLIC HEALTH MEDICAL OFFICER (PRIMARY CARE MEDICAL DIRECTOR). The Jefferson County Department of Health, serving an urban community in a County with a population of 640,000, is seeking a well-qualified physician to direct medical services for two full-scale primary care facilities. Excellent opportunity for physician with administrative ability and experience in the delivery of primary health care and an interest in community medicine. Organize and direct medical services, plus spend time in direct patient care. Salary $46,000 plus fringes. Send resume to Joseph W. Cutin, Personnel Dir., 301-A Courthouse, Birmingham, Alabama 35203. An equal opportunity employer M/F, Handicapped.

FAMILY PRACTICE—GP

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FEBRUARY 1978

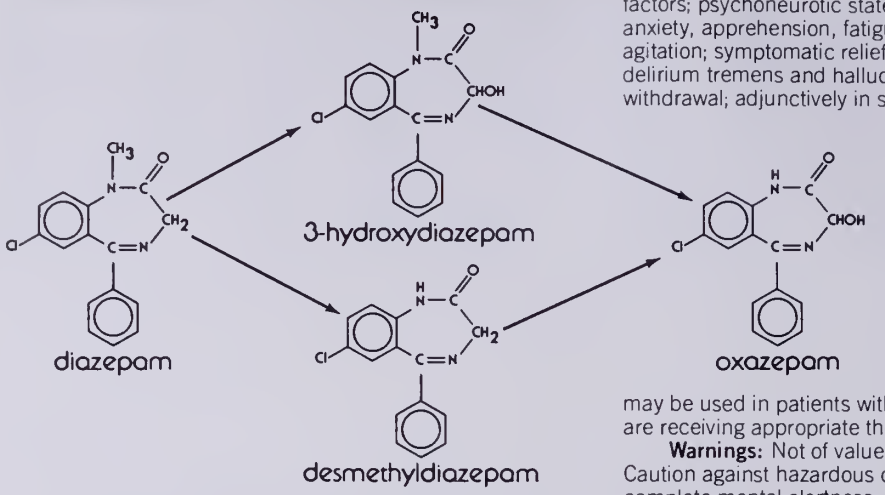
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Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost ($1.65) from MASA.

Final authority on grammar is Webster's *New International,* Unabridged, Second Edition.

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Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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FROM THE EXECUTIVE DIRECTOR

Spreading The Word April 20 - 22

When Franz J. Ingelfinger, M.D., Editor Emeritus of *The New England Journal of Medicine,* was asked to write an article on how doctors get their information, he seemed almost nonplussed.

The result was a chapter entitled "Spreading The Medical Word," published in *The Horizons of Health* by Harvard University Press last year. Dr. Ingelfinger still doesn't know for sure how doctors keep abreast. And if one of the finest medical journal editors of the age doesn't know, who does?

Dr. Ingelfinger went on at some length on the channels of medical communication—the journals, even the esoteric ones, papers, audiocassettes, and the other modern devices for spreading the word.

If we interpret Dr. Ingelfinger's conclusions correctly, he believes that the most important single contribution to the dissemination of medical knowledge is the "invisible college"—those occasions when physicians get together to share what they have learned, what they know, and ask questions of their colleagues who may have had similar or different experiences.

The most important invisible college in Alabama this year will be in Huntsville April 20 - 22 in the Von Braun civic center. We like to call it the highly visible annual session of MASA, which it is, but is more than that.

It is the time when Alabama physicians get together for serious business, scientific lectures, some fun, a few drinks with old friends perhaps, good food and a chance to let off steam.

Is this what Dr. Ingelfinger meant as the most important single channel of medical communication? We like to think so, but we know you will be glad you came. It may be the best annual session in many a year, but only the presence of the visible communicators, Alabama physicians, will make it a total success. Put it on your calendar.

Lon

S. Lon Conner

ABOUT THE COVER

This was to have been a more or less formal portrait of Dr. Charles E. Parker, the subject of this month's profile. It didn't turn out that way. First of all, Dr. Parker vigorously protested the very idea of an article about him. "I don't want to be eulogized," he said. Then, he said he would have nothing of sitting for his picture in his office. If we insisted on going through with the nonsense of a profile, and needed a picture, he could probably dig up a vintage snapshot, he said. Against his direct orders, we set up the equipment and began clicking away, 36 frames in all, while Dr. Parker joked with people in the room and only occasionally thought of the camera -- this being one time he did, with evident dismay. Story, page 10.

Photo by William H. McDonald.



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1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

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Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.
Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

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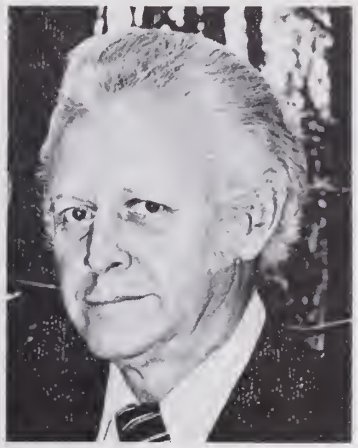
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Dosage: Initial: Adults: 1-2 capsules or 1-2 tablespoonfuls elixir every 6-8 hours, children 8-12: 1 tablespoonful or one capsule every 6-8 hours and children under 8: 3 to 5 mg theophylline/kg body weight every 6-8 hours. Theophylline dosage may be cautiously increased to 2000 mg/24 hr in adults or 7 mg/kg in children; monitoring of serum theophylline levels at higher dosages is recommended.
Precautions: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other xanthine derivatives concurrently. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea and vomiting. The frequency of adverse reactions is related to the serum theophylline level and are not usually a problem at serum theophylline levels below 20μg/ml.
How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Elixir in bottles of 1 pint and 1 gallon.

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Faith In Faithless Men

We believe whatever we want to believe.—Demosthenes, 348 B.C.

Much has changed since the 4th Century before Christ, but many things appear to abide forever. The belief in the power of worthless nostrums is one of them.

Laetrile is only the most recent in a long line of quack cures for cancer. It was not the first and, human nature being what it is, it won't be the last.

The modern age of popular cancer hoaxes in the United States began shortly after the birth of this century, with "Dr. Johnson's Mild Combination Treatment for Cancer."

In 1910, what was then the Bureau of Chemistry (now FDA) attempted to prosecute the promotor of that drug, which was endorsed by thousands who had, they said, been cured of cancer by using it.

The Supreme Court ruled in the Johnson case that the law did not prohibit false "therapeutic claims" on drug labels. President Taft immediately called Congress into session to close this dangerous gap in law, saying:

"There are none so credulous as sufferers from disease. The need is urgent for legislation which will prevent the raising of false hopes of speedy cures of serious ailments by misstatements of facts as to worthless mixtures on which the sick will rely while their disease progresses unchecked."

Congress responded with the Sherley Amendment of 1912, which made it a crime to label drugs with false and fraudulent claims of therapeutic effectiveness. Unfortunately, the words "and fraudulent" made it difficult for prosecutors to prove.

The fight to protect the public from its own faith in faithless men and their nostrums had just begun. It wasn't until 1938 that Congress passed a law requiring proof of safety; and not until 24 years later, 1962, that it decreed that a new drug must also be effective. Today, federal law says drugs must be both safe and effective.

The 1962 act came against a background of very recent experience with quackery: in the 1940s there was the case of William F. Koch of Chicago, who peddled what was later determined to be distilled water as a cancer cure, for which more than 3,000 of his practitioners across the country paid Koch $25 per ampule for the treatment and charged patients as much as $300 for a single injection.

Koch's 1943 trial lasted 18 weeks, covering 9,000 pages of testimony, much of it testimonials of miracle cures. The jury deliberated eight days but could not reach a verdict because three of the jurors were persuaded of the efficacy of his cure. Subsequent trials never convicted him but he was finally driven from the country. The Koch treatment continued to be available in, of course, Mexico, the origin of Laetrile now.

The Koch treatment, and the thousands of gullible Americans who swore by it, was followed in the 1950s by the similar spectacular success of the "pink and black" medicines of Harry Hoxsey, who was prosecuted in several states for the illegal practice of medicine but managed to survive at a "clinic" in Dallas, Texas, where at one time more than 10,000 people were swarming for cancer treatment at $400 for a "lifetime" supply.

Only after a decade of court fight was he finally enjoined from his treatment, which had cost his patients an estimated $50 million.

CONTINUED ON PAGE 12

Robert Parker, M.D.

The best of times, the worst of times . . .



C. 1929

The following profile of Robert Parker, M.D. (see cover), now Executive Secretary of the State Board of Medical Examiners, is a mixture of biographical fact and the personal appreciation of the writer, who was once one of Dr. Parker's pediatric patients and who has followed his remarkable career for 47 years. In the opinion of some, Dr. Tinsley Harrison among them, Dr. Parker may well be one of the premier medical statesmen in the history of the state. By any assessment, he has been a humanitarian, builder and leader, so recognized by the AMA in its coveted Benjamin Rush award. At 75, Dr. Parker maintains the finely honed sense of comedy that saw him through the beginnings of his practice in Montgomery the month after the stock market crash of 1929 and through the years since.

By WILLIAM H. McDONALD

It was, if memory serves, a raw wintry day in February 1931 when I first met Robert Parker, M.D.

He was not yet 29 and I had just turned 6.

It was an unfair encounter from the outset. Young Dr. Parker, grinning with that famous dimpled smile of his that was to endear him to more than 50,000 Montgomery children (or at least their parents) over the next 45 years, was in vibrant good health, radiating charm and professional competence while I lay wretched in bed, racked by heaven only knows what awful virus.

I had never seen Dr. Parker before that moment and I didn't like him, despite his manifest good looks, youth and professional elan. In fact, I didn't like any doctors, least of all that breed I had never before heard of—pediatricians.

I would probably like him more than Dr. △ (hereinafter referred to as just that, for reasons that will be obvious), an older baby doctor who had pretty well cornered the practice in Montgomery before Dr. Parker arrived, but that wasn't saying much.

Dr. Parker had suddenly emerged, in 1931, with a manner, style and professional talent that was to make him, without cavil, the most popular doctor in Montgomery and, in five decades, its outstanding citizen. He was to give so enormously of his abilities that it became simply impossible to conceive of a city without him.

Of course, I knew nothing of that at that first meeting. He was just another idiot doctor to me, notwithstanding all the fine things my father had told me about him before he ushered him into the crowded bedroom of our small, middle-class home in Oak Park.

Feverish and utterly miserable, I hurt everywhere. My left ear was particularly painful. I knew from other boys my age that the treatment of choice in those days for an abscess, which I had concluded I had, was "lancing," which Dr. △ believed in, I was told.

Dr. Parker, obviously sensing my distrust, tried to establish some immediate rapport by sitting on the bed and examining my throat with his fingers. "Got a neck like a bull," he muttered with that grin that was to be his trademark. "My dad used to tell me back in Georgia that a neck like that meant a bad boy. Guess I'll just have to do the best I can."

I'm not certain of the exact words, but that was the substance of it. In spite of myself, I suddenly felt almost ashamed for hating him so much. It was nothing personal, of course, it was just that, as a class, doctors were no good.

I suppose I got this from my mother, who had migrated from rural Crenshaw County and had never really left her feelings that doctors, if you could afford one at all, were only useful when you were dying, and then only in a kind of ceremonial role, along with the preacher.

My father, born to the city, such as it was then, was of the opposite persuasion. A hopeless hypochondriac, despite his great wit and bonhomie, he was always going to one doctor or another for one of his countless ailments.

And he had called Dr. Parker, over the combined protests of my mother and me.

Looking back these 47 years later, I can see that I had embraced, without question, the benighted *under*utilization of medicine as practiced by my mother and saw in my father's *over*utilization conclusive proof that she was totally right and he was totally wrong.

The truth, it now appears, lay somewhere in between, but that subtle logical distinction escaped the six-

year-old mind. In any case, this was part of the medical problem facing Dr. Parker as he entered the room.

Dr. Parker had been in practice a little over a year. I doubted that he knew anything more than the prescription for some vile medicine that I had no intention of swallowing. He must have sensed that; he didn't prescribe any. Aspirin only, he said, plenty of fluids, hot water bag for the ear and other orders my mother wrote down, grudgingly, on the back of an envelope with a stub pencil.

When Dr. Parker returned a few days later, I was all but well. The ear had drained, my fever was gone, the cough had subsided. My only complaint was that all those compulsory gallons of liquid – fruit juices, mainly – made me urinate constantly.

Dr. Parker laughed when I told him of my beef. "That was the idea," he said with a broad smirk that conveyed to me that he and I now shared a secret that few others in the world knew; the way to get rid of whatever ailed you was to wash it down the commode.

All of a sudden, I liked him. When, more than 40 years later, as a newspaper editor, I wrote an editorial about him, I remembered this scene.

Many subsequent ones occurred through the years of the Great Depression when I was too old for a pediatrician but would have no other doctor. There were a million other memories of him, who was to become my favorite person, not just doctor, and the favorite of many generations of Montgomerians.

Wherever they went, off to war, to college, on to success and business and the professions, not one ever forgot Dr. Parker and not a one ever failed to keep up with his unparalleled career and all the bountiful things he came to mean to his city, state and nation.

When the American Medical Association bestowed its coveted Benjamin Rush Award for community service on Robert Parker, M.D., in 1974, if there was a surprised person in the city or the state, it had to have been someone who had never heard of the YMCA, Red Cross, mental health, and all the other things Dr. Parker had contributed so much of his time and talents to for so many years.

After all, a year earlier, May 7, 1973, had been officially proclaimed Bob Parker Day in Alabama and no one questioned the rightness of Gov. Wallace's doing that.

(Characteristically, although this has never been told, Dr. Parker took the $5,000 check he got from AMA, matched it with one of his own and sent the YMCA a nice contribution of $10,000. I'm not supposed to know this.)

Dr. Bob Parker is *sui generis* to all who have known him—a man apart.

He was born May 16, 1902, in the little community of Newnan, Georgia, where his father operated a country store. Bob was an only child, born to a moderately well-to-do mercantile family in an agrarian age.

As a youngster, he took a fancy to a town hero, Dr. Tom Bailey, eventually made house calls with him and, in high school, watched him perform surgery.

Dr. Parker is not sure, as few ever are, precisely at what moment in his life he decided to be a physician. He has tried many times to pinpoint that occasion.

It may have been as late as age 13, when a dear family friend, Mrs. Cliff Chapman, wrote down the day and time when, she said, he pronounced that he was going to be not just a doctor but a baby doctor.

Dr. Parker cudgels his brains and reflects on an earlier time. He was 6, in the first grade, when he got his first bicycle for Christmas. Trying to ride it, he fell. The pedal tore a chunk out of his leg. He still displays that scar and tells how it was in the days when the only home remedies were calomel, turpentine, castor oil, and Carter's Little Liver Pills.

He was on crutches for a long time, but Dr. Bailey eventually got him back on his bicycle, a feat of medicine unmatched in the life of a boy of that age.

In any case, whenever the medical muse had its way, Robert Parker was on his way by high school, headed for Vanderbilt, because of certain confessed prejudices against the University of Georgia and other institutions.

While there just after World War I he earned a reputation as a prankster. Unjustifiably, he says. Not even today will Dr. Parker give you a straight answer when you demand to know whether he did, in fact, plant a frog in the bed of Dr. Tinsley Harrison, who was then Chief Resident at Vanderbilt when Robert Parker was a lowly medical student.

"The Chief Resident was damn near the Dean," Dr. Parker recalls with a puckish grin, "and he thought he was too."

But did you, Dr. Parker, actually put that frog in that bed? Fifty years after the fact you get such answers as this:

"Now, it's true there was a frog in Tinsley Harrison's bed. It's also true, at one time or another, I had that frog. I suppose I could have done it, but I never did admit it then and I don't admit it now."

He is not a responsive witness.

When 500 Montgomery leaders assembled one fine spring night in 1973 to honor Dr. Parker, in a surprise banquet which had been organized under something close to wartime security, a bundle of testimonial letters was presented to the honoree testifying to his noble worth in the state and nation.

Most of them were predictably flattering: letters from the Mayor, businessmen, movers and shakers of state and local politics, ministers and so on.

But one was slightly out of kilter. It was from Tinsley R. Harrison, M.D., who apologized for not being able to attend the May 7 dinner. Addressed to Dr. Parker personally, it reads in part:

"I readily recall those days at Vanderbilt between 1925 and 1927 when I was at first the chief resident in Medicine and later an instructor on the faculty. You were a 3rd year and then 4th year medical student.

"Insofar as I remember you never had the slightest scholastic difficulty

CONTINUED ON PAGE 24

Faith In Faithless Men CONTINUED FROM PAGE 9

The Hoxsey cure overlapped in time with Krebiozen, the wonder drug promoted this time, not by a backwoods charlaton, but by a respected scientist, Dr. Andrew D. Ivy of the University of Illinois, who had, for mysterious reasons, given his name to two Yugoslav immigrants, who said they had discovered Krebiozen in Argentina.

Dr. Ivy became famous for battling the scientific community, AMA and individual physicians because of his stand against what was called the "medical trust." He was supported in Congress by several United States Senators, led by the late Senator Paul Douglas.

Many thousands of patients bought Krebiozen and swore to its efficacy. Most of the injections were found to contain mineral oil but it took 15 years to stop the flow of Krebiozen. Even then, Dr. Ivy, an inexplicable man, repaired to his office in Chicago where he continued to dispense the substance, changing the name to Carcalon. He retired a year ago and died Feb. 7 at 84.

There have been many other cancer treatments in the past 30 years, but these are the most outstanding monuments to the blind faith that sometimes guides human behavior under stress—until Laetrile, which began life in the Prohibition era as an unsuccessful flavoring for bootleg whiskey.

Twenty-five years ago, the Cancer Commission of the California Medical Association investigated Laetrile and found it worthless. The state subsequently banned it. Sloan-Kettering conducted 37 experiments on it over a five-year period and it is, in the opinion of some, the most investigated drug of our time. Even the Mexican government has cracked down on it as worthless.

Yet here it is in a bill before the Alabama Legislature described as a "food substance," which two federal courts, relying on the best scientific evidence in the land, have already said it is not, and as "B-17", which does not exist. Already, 14 states have legalized Laetrile.

The more things change, the more they are the same. The shades of "Doctors" Johnson, Koch, Hoxsey, et al, must be applauding the flair and gall of their follower, Laetrile promotor Ernest Krebs, Jr.

The human tragedy continues.

John B. M. Rice, Jr., M.D.



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* **INDICATIONS:** Based on a review of this preporation by the Nationol Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: **Possibly effective:** In cutaneous candidiasis; superficial bacterial infections; the following conditions when complicated by candidal and/or bacteriol infection: atopic, eczematoid, stasis, nummular, contact, or seborrheic dermatitis, neurodermatitis, and dermatitis venenato; infantile eczema; lichen simplex chronicus; and pruritus ani and pruritus vulvae.

Final classificotion of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Viral diseases of the skin (such as vaccinia and varicella); fungal lesions of the skin except candidiasis; history of hypersensitivity to any product component. Not intended for ophthalmic use; should not be applied in the external auditory canal of patients with perforated eardrums; should not be used when circulation is markedly impaired.

WARNINGS: Because of the potential hazard of nephrotoxicity and ototoxicity, prolonged use or use of large omounts of this product should be avoided in the treatment of skin infections following extensive burns, trophic ulceration, and other conditions where absorption of neomycin is possible.

Usage in Pregnancy: Although topical steroids have not been reported to have an adverse effect on the fetus, the safety of topical steroids during pregnancy has not been absolutely established, therefore, do not use extensively on pregnant patients, in large amounts, or for prolonged periods.

PRECAUTIONS: Watch constantly for overgrowth of nonsusceptible organisms (including fungi other than candida). Should superinfection due to nonsusceptible organisms occur, odminister suitable concomitant antimicrobial therapy; if favorable response is not prompt, discontinue the preparation until adequate control by other antiinfectives is effected. If extensive areas are treated or if the occlusive technique is used, the possibility exists of increased systemic absorption of the corticosteroid; suitable precautions should be taken. If irritation develops, discontinue the product and institute appropriate therapy.

ADVERSE REACTIONS: Sensitivity reactions to topical use of gramicidin are rare. Hypersensitivity to nystatin is extremely uncommon. Hypersensitivity to neomycin has been reported and articles in the current medical literature indicate an increase in its prevalence.

The following local odverse reactions have been reported with topical corticosteroids either with or without occlusive dressings: burning sensations, itching, irritation, dryness, folliculitis, secondary infection, skin atrophy, striae, miliaria, hypertrichosis, acneform eruptions maceration of the skin, and hypopigmentation. Contact sensitivity to a particular dressing material or adhesive may occur occasionally. Ototoxicity and nephrotoxicity have been reported.

For full prescribing information, consult package insert.

HOW SUPPLIED: Available in 15, 30, and 60 g. tubes. It is also available in jars of 120 g. (4 oz.) for hospital or institutional use only.

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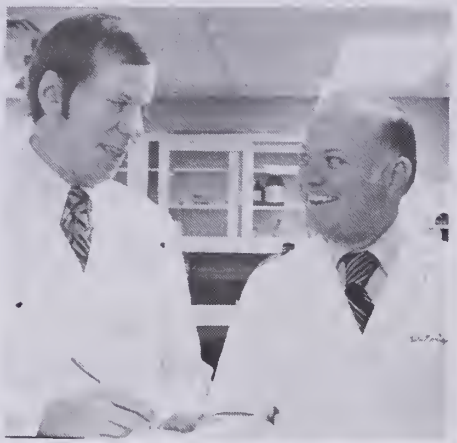
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Building on the basics...



(1)

(2)







(5)



SILAS W. GRANT, B.A., M.D.
Acting Dean, The University of Alabama in Huntsville
School of Primary Medical Care, Huntsville

(1) Dr. Claude Kinzer, second year SPMC family practice resident, shows equipment in the Huntsville Hospital nursery to Rob Baskin, Class of '77, and Marcus Erling, Class of '78. Dr. Baskin is now a first year SPMC family practice resident. (2) John L. Sloyer, Jr., Ph.D., Research Assistant Professor, and Dr. John R. Montgomery, Professor and Chairman, both of the SPMC Pediatrics Faculty, discuss a biomedical research project in the UAH Ambulatory Care Center. Dr. Sloyer received a third place award in the Young Investigators competition of the Southern Society for Pediatric Research last year. (3) L-R: Dr. Silas W. Grant, Acting Dean, UAH School of Primary Medical Care; Major General Rachmeler, Redstone Arsenal; and Dr. Benjamin Graves, President, UAH, look on as Colonel Robert McLean signs the new affiliation agreement between the UAH School of Primary Medical Care and the Redstone Army Hospital. (4) Dr. George W. Corner, Professor of Obstetrics and Gynecology, UAH School of Primary Medical Care, and Dr. Pam Shirley, first year SPMC family practice resident, examine a patient in the SPMC obstetrics and gynecology clinic. (5) Harry Kuberg, Class of '79, and Dr. Carl A. Grote, Jr., SPMC Clinical Faculty in Family Medicine, attend to a patient in Dr. Grote's office.

As I talk with individuals and groups in Huntsville and lother locations in Alabama about the educational programs of the UAH School of Primary Medical Care, there's a question that seems often to be in people's minds, whether or not they come right out and ask it.

The question goes something like, "O.K., we understand that you're a community-based medical school – but what's it like to be studying or teaching there? Is it like medical school as we know it?"

To the doctors in the house, let me state that in all the ways that count, the community-based medical school *is* like medical school as you and I knew it, only more so. There is a sound traditional academic base, which in the case of the UAH School of Primary Medical Care is verified and assured through the accreditation of the University of Alabama School of Medicine, of which the Huntsville school is a clinical component.

At the Huntsville and Tuscaloosa campuses as in Birmingham, you would find yourself in familiar settings – hospital rotations, classroom teaching, clinical conferences, even laboratory research (photos 1 & 2).

You would also find yourself in a variety of educational experiences that are less fully developed or unavailable in programs like those in which most of us were trained. The way a community-based school is structured makes these opportunities possible.

Like most community-based medical schools, the UAH School of Primary Medical Care relies on local hospitals for inpatient teaching facilities and on local physicians to do a major share of the teaching in the student, resident, and CME programs. The School reciprocates by making available to the medical community a package of resources that can be used to help maintain professional excellence – continuing education courses, regularly-scheduled clinical conferences (many of which are also approved for AMA and AAFP credit), a rapidly growing health sciences library across the street from Huntsville, and so on.

Anxiety Unjustified

To those of us educated in schools that operated their own teaching hospitals, with the strong direct control over clinical teaching situations inherent in such an arrangement, the thought of using community clinical facilities for teaching may bring some uneasiness.

From our experience in Huntsville, such anxiety is not justified. First-year residents in the UAH School of Primary Care–Huntsville Hospital Family Practice Residency Program spend most of the first phase (18 months, or half of their three-year residency) in Huntsville Hospital; our junior medical students spend major portions of their clerkships in medicine, pediatrics, obstetrics and gynecology, surgery, and psychiatry in hospital settings.

Our chief teaching hospital and partner for nearly five years now in the education of students and residents is Huntsville Hospital, the fourth largest general hospital in the state and a regional referral center for northern Alabama and south central Tennessee. The Hospital's wide-ranging building program, which will be implemented over the next few years, includes plans for the updating, expansion, and improvement of such existing services as the only newborn intensive care unit in North Alabama, the hemodialysis treatment center, and the radiation oncology treatment center, already one of the most extensively equipped in the Southeast.

The Hospital plans to add a cardiac catheterization room and a long-term care unit, as well as more general medical-surgical and psychiatric beds. Sleeping quarters for residents will be among facilities added to accommodate more conveniently the teaching programs of affiliated institutions. The plans provide for expanded facilities for every activity of Huntsville Hospital.

Unusual Commitment

For hospital care of patients presenting at the Emergency Room, the Hospital and the medical school have a mutually beneficial arrangement that is unusual even for a community-based program in the degree of commitment and trust on both sides.

All adult patients presenting at the Huntsville Hospital Emergency Room with internal medicine problems and without a designated physician are admitted, if they require hospitalization, under the name of the UAH School of Primary Medical Care Chairman for Internal Medicine, Dr. J. Ellis Sparks.

These patients are cared for by him, with the assistance of family practice residents and medical students, with specialty consultations being provided by the Clinical (volunteer) Faculty in Internal Medicine – all local physicians – and other doctors on the staff at Huntsville Hospital. Student and resident responsibilities on this service are very similar to those on teaching services in university hospitals.

Huntsville's proprietary hospitals, Medical Center and Crestwood, are cooperative with and supportive of both the student and resident programs. To date, students and residents attend patients in these two hospitals only when assigned to a staff physician who is serving as a preceptor. Student and resident elective options are available at The Retreat, a 64-bed private psychiatric hospital, and North Alabama State Hospital, both in Decatur.

With Col. Robert McLean, Commander of the Medical Department Activity at Redstone Arsenal, we recently signed an expanded affiliation agreement (photo 3) that will facilitate third and fourth year medical students, residents, and SPMC faculty using the new Fox Army Hospital at Redstone as part of the clinical teaching program.

Redstone already makes available outpatient facilities for training in dermatology and pediatrics, and plans to make facilities available as needed for internal medicine, general surgery, orthopedics, psychiatry, family practice, and emergency service in the months after the new hospital opens.

Several of the Redstone medical officers are members of the medical school clinical faculty.

Neighborhood clinics, public health departments, school health programs, and mental health, planned parenthood, rehabilitation and crippled children's clinics also serve as settings for portions of the student and resident programs. The school is in its third year of operating the obstetrics clinic at the Madison County Health Depart-

CONTINUED ON PAGE 31

Why Teach Bystander CPR?

By Dura Benefield, R.M., and
Donna Dale, R.N., M.S.N.,
CPR Instructor-Trainers

Cardiovascular disease accounts for more than 650,000 American deaths each year. Half of these are "sudden deaths" commonly witnessed by bystanders located in homes, shops, restaurants, or other public places.

The effectiveness of cardiopulmonary resuscitation (CPR) given within four minutes of collapse is significantly greater than when longer delay occurs.

A decreased morbidity and mortality can be measured by higher blood pressure on admission to the hospital, lower pulmonary artery pressure, decreased serum enzymes (SGOT, creatinine Kimase), fewer hospital days, less CNS impairment, and fewer deaths.

Many Alabamians do not have ambulance service within four-minute access. Less than 1% (10,608) of Alabama's total population is CPR trained today. By teaching CPR in the public schools, it is anticipated that 64,000 people annually will become qualified to assist in such emergencies.

Other priority lay people for CPR instruction are found in civic groups, industries, business, and families of patients with known cardiovascular disease.

The survival rate for cardiac victims in Seattle is now 1 in 4 where it had previously been 1 in 10. This may partially be attributed to having 20% of the adult population trained in CPR technique.

The American Heart Association, Alabama Affiliate, has designed a course which instructs students to maintain life until the victim reaches advanced life support.

The course includes didactics dealing with risk factors, prudent heart living, early warning signs of heart attack, CPR skills, and manikin practice. Students are taught basic support of heart attack victims as well as management of obstructed airway, electric shock, drug overdose, stroke, and suffocation.

We strongly feel that with more lay people properly CPR instructed, many lives could be saved with a favorable outcome. □

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Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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Kaon® Elixir
(potassium gluconate)

Kaon® Tabs
(potassium gluconate)

BRIEF SUMMARY
Kaon Tablets/Kaon Elixir

KAON® (potassium gluconate) TABLETS

Description: Each sugar-coated tablet supplies 5 mEq. of elemental potassium (as potassium gluconate 1.17 Gm.). Kaon Tablets are sugar coated, not enteric coated, which favors dissolution in the stomach and absorption before reaching the small intestine where the lesions with enteric potassium chloride have occurred. The sugar coating merely adds to palatability and ease of swallowing, not to delay absorption as does the enteric coating.
Indications: Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. It may be used in the treatment of cardiac arrhythmias due to digitalis intoxication.
Contraindications: Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.
Warning: There have been several reports, published and unpublished, concerning nonspecific small-bowel lesions consisting of stenosis, with or without ulceration, associated with the administration of enteric-coated potassium tablets alone or when they are used with nonenteric-coated thiazides or certain other oral diuretics. These small-bowel lesions have caused obstruction, hemorrhage and perforation. Surgery was frequently required and deaths have occurred. Available information tends to implicate enteric-coated potassium salts, although lesions of this type also occur spontaneously. Therefore, coated potassium-containing formulations should be administered only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Coated potassium tablets should be used only when adequate dietary supplementation is not practical.
Precautions: In response to a rise in the concentration of body potassium, renal excretion of the ion is increased. With normal kidney function, it is difficult, therefore, to produce potassium intoxication by oral administration. However, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentra-

Time is the test of all things



tions of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

In hypokalemic states, especially in patients on a salt-free diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation. In these circumstances, Kaon (potassium gluconate) should be supplemented with chloride. Ammonium chloride is an excellent source of chloride ion (18.7 mEq. per Gram), but it should not be used in patients with hepatic cirrhosis where ammonium salts are contraindicated. Other sources for chloride are sodium chloride and Diluted Hydrochloric Acid, U.S.P.

It should also be kept in mind that ammonium cycle cation exchange resin, sometimes used to treat hyperkalemia, should not be administered to patients with hepatic cirrhosis.

Adverse Reactions: Nausea, vomiting, diarrhea and abdominal discomfort have been reported. The symptoms and signs of potassium intoxication include paresthesias of the extremities, flaccid paralysis, listlessness, mental confusion, weakness and heaviness of the legs, fall in blood pressure, cardiac arrhythmias and heart block. Hyperkalemia may exhibit the following electrocardiographic abnormalities: disappearance of the P wave, widening and slurring of QRS complex, changes of the S-T segment, tall peaked T waves, etc.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications." Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

KAON® (potassium gluconate) ELIXIR

Description: Each 15 ml. (tablespoonful) supplies 20 mEq. of elemental potassium (as potassium gluconate, 4.68 Gm.) with saccharin and aromatics. Alcohol 5%.

Indications: See Kaon Tablets.

Precautions: See Kaon Tablets.

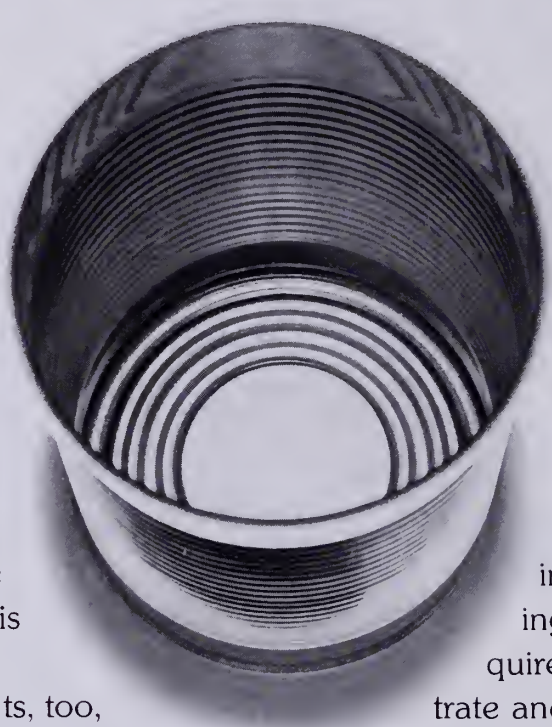
In hypochloremic alkalosis, potassium replacement with potassium chloride (e.g., Kaochlor® 10% Liquid) may be more advantageous than with other potassium salts.

Adverse Reactions: See Kaon Tablets.

Overdosage: See Kaon Tablets.

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We recommend selecting an agency that has had experience in collecting for physicians, dentists, and hospitals. Checking agency references is a must. Then your next step is being sure that your staff cooperates with the agency in the four ways we've outlined.

1. *Use a good "patient history" form.* It will help your staff and your collection agency to do a better job on delinquent accounts. At the very least, you'll need the patient's (or responsible person's) name, full address, phone number, marital status, birthdate, employer, employer's address and phone, the name of the person or physician who referred the patient and full insurance information. If the patient is married you should ask for the same information on the spouse. And remember to have patients fill out a new form periodically — annually is recommended. Today, name, marital status, and jobs change with great frequency.

2. *Keep good records.* This means your staff should record all written or telephone contacts with a patient as they try to collect. Share the record of your efforts with the collection agency. *Never* bill or contact the patient after turning the account over.

3. *Turn accounts over on a regular, monthly basis.* If a patient hasn't responded to repeated billing and contacts from your office after a period of time, take action. Medical accounts should be given to a professional collector after 120 or 180 days. Many physicians wait too long — as long as a year or two — making it almost impossible for even the agency to do its job. "Aging" your accounts will help you determine which ones to refer. Your accountant can show your staff how to do this.

4. *Don't ask for "progress reports."* Repeated calls by your staff for information about the status of delinquent accounts isn't a good idea. Agency personnel are busy "reporting" when they should be "collecting."

One word of caution. If your account followup indicates the patient's refusal to pay is based on dissatisfaction with the service, review the account carefully before turning it over to a collection agency.

A malpractice suit can be triggered by collection enforcement of an account of a patient with a substantive grievance. □

LETTERS

They Opted Out

Editor, The Journal:

I am writing to protest the bill removing the physician's exclusion from jury duty. As it is currently written, the exclusion applies to all groups *except lawyers and judges.*

This is patently unfair! Why exclude the one group who best knows legal shenanigans and recognizes courtroom trickery? It also seems to violate the "equal protection" clauses of the U.S. Constitution.

I have no objection to serving on a jury, if everyone, absolutely everyone, is required to also serve when called. However, if the present bill becomes law, I want to urge MASA to file a class-action suit against the state challenging the constitutionality (both state and federal) of excluding the attorneys and judges.

Hoyt A. Childs Jr., M.D.
Fairhope, Ala. □

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Vanderbilt, 1927

The best of times, the worst of

CONTINUED FROM PAGE 11

and from an academic standpoint sailed through with flying colors. However, you were able to get into more mischief than any medical student I have ever known.

"...You were guilty, in my view, of malice in addition to mischief. Who but Bob Parker, lowly 3rd year student, would dare put a frog in the bed of the Chief Resident?"

And who but Bob Parker would still refuse, after all these years, to confess?

Dr. Harrison's letter is instructive in other ways about the life, career and character of Dr. Parker. It continues:

"Having spent a major part of two years getting you out of trouble, I have been gratified, at times amazed, by your subsequent career. You have probably instilled yourself in the hearts of more mothers, infants and young children than any other physician in the history of our state.

"You have given unsparingly of your own time at the expense of your own pocketbook to be perhaps the greatest medical statesman at the state level Alabama has ever had. You have led our medical society constantly in the direction of saying to yourself, 'My patients come first and I come second.'

"To know that you were among the policy-maker members of our profession was one of the attractions that led me to return to our native state after an absence of 35 years.

"You and I have had a long-standing personal agreement that neither would say anything good about the other or think anything bad about the other. Please forgive me for voiding this agreement on this one occasion...."

A second letter in that bulging testimonial offering reveals another facet of Dr. Parker's rich character, or perhaps it's not really so different. That letter was from Bishop Joel McDavid, Florida District, United Methodist Church, who had served for many years in Montgomery, knew first-hand the immensity of Dr. Parker's contributions, and who was, for a time, Dr. Parker's minister.

Bishop McDavid contemplated a picture of Dr. Parker walking across a golf course, shirt tail hanging out, heading toward a copse of trees, back to the camera. The westering sun cast a shadow, which inspired Bishop McDavid to observe:

"...There is only one thing wrong about this picture. With all of its beauty and with all of its clarity, there is one thing wrong. Bob Parker's shadow is too short. For this shadow extends around thousands of children who are healthy because of his concern.

"Thousands of others who, through his community activities, have discovered hope and developed good habits through all of his interests and his concern for them. I hope when you see this picture you will think of lengthening that shadow to include all of these and all of us."

With all his towering concern, for all the majesty of his life, Dr. Parker is very likely one of the most raucous, zaniest, most delightfully irreverent men extant in these days when old fashioned high spirits seemed to have gone out of style. He has always been a man of infinite jest. Paradoxically, he is also very courtly: he forces everyone to precede him through a door.

And what is the truth of the story that, also at Vanderbilt, he released a pigeon in the middle of the redoubtable Dr. Brooks' medical lecture, the most feared professor in the whole college?

Dr. Parker, how say you to these charges?

"Now it's true that a pigeon was released in Dr. Brooks' class. It's also true that, at one time, I had that pigeon in my possession...."

Do we have to listen to more of this?

On a recent winter afternoon, Dr. Parker was sitting in the kitchen of the MASA building in Montgomery, a huge pickle in one hand and a tremendous hunk of pound cake in the other. He was munching on these strange viands when Lon Conner, Executive Director of MASA walked in and stopped short.

"Good heavens, Dr. Parker, are you eating cake and pickle at the same time?"

Dr. Parker paused, swallowed, fixed Conner with a quizzical, almost baleful eye and said:

"Well, I don't know why not. They're both good."

His face then exploded in that famous grin and he laughed boisterously at Conner's ultra-conservative views of the human diet—or the Parker diet.

He was that way back in the 1930s, when he first began practice in Montgomery. He took a detached, stoic view of the things children ate, insisting only on certain basics, realizing that no doctor and no parent was ever going to control everything ingested by a healthy child.

It's necessary to go back now to a few of the forces that shaped this remarkable man.

When Bob Parker was growing up in Newnan he was greatly influenced by the example of his grandmother's brother, Elisha Cureton, who had been wounded in the Civil War at 16, paralyzed by a bullet in the spine.

"He never complained," Dr. Parker recalls. "He built a wheel chair with with some kind of nobs that enabled him to pump the wheels to get around. He wouldn't accept help from anybody. He designed a hand clutch for an automobile around 1920, when there were damned few automobiles. He perfected a hand brake too and drove that same car for 10 years.

times . . .

"When he died, he had two hosiery mills and a store. He should have been an engineer."

As a youngster, Bob Parker was impressed by such a will to live and achieve, by this example of the indomitable human spirit. When times were tough for Dr. Parker, as they often were, he remembered this shining example of stamina and fortitude.

"He never gave up," Dr. Parker recalls.

Neither has Dr. Parker, although there must have been times when he was tempted to at least relax and not try to do it all himself, which has been his style.

He interned at Vanderbilt and did his residency at Willard Parker and Babies Hospital in New York City. While in New York, he transfused the grandchild of oil baron Harry Sinclair in the Ritz Towers for the biggest fee he ever received — $750, at a time when he was making the grand salary of $25 a month. ("Residents make $1,200 a month now. I had to get by on $25 and an occasional $5 bill for running a specimen for a senior staff member.")

Pediatrics was a relatively young specialty then. Dr. L. Emmett Holt, "the man who wrote the book," had opened Babies Hospital in the late 1800s. The major menace then, as in the early days of Dr. Parker's practice, was contagious disease.

With no money in the big city, residents had to depend on the crumbs of charity from New York and the entertainment world for such diversion as they had. Tickets to everything were always available, from boxing matches to opera, as if the city and its glittering world of show business recognized an obligation to young doctors that was certainly not fulfilled by the pay they received.

Dr. Parker's only complaint about this system was that opera became compulsory, because an influential staff physician had married into a family involved in New York opera and felt it part of the cultural rounding of young physicians that they attend.

"I hated it," Dr. Parker says, his mouth turned down in distaste at the memory. "Ruth (his wife of 43 years) would have loved it, but I hated it."

A fortuitous event occurred in the fall of 1928, an event that may have turned Dr. Parker toward his eventual location in Montgomery. One day when he was having breakfast at Babies Hospital, a "Lesene Smith, M.D.," from Spartanburg, S.C., called the hospital and asked to make rounds with a resident. He had come up for the Army-Notre Dame game, but that was only part of his plan.

Each year, Dr. Parker later learned, Dr. Smith made the grand tour of hospitals: up the Eastern seaboard, Virginia, New York, Philadelphia, Boston, thence to Montreal and Toronto, back down through Detroit, Cleveland and St. Louis and then home.

In those days, that was CME.

He made the rounds with young Dr. Parker on a Saturday morning in November 1928, took a fancy to him and wrote, after a long silence, in March 1929, thanking Dr. Parker for his time. He also asked if the young Georgia physician would be interested in doing summer work in Saluda, N.C., where Dr. Smith had a charity hospital of 20 beds and a big group of cottages and cabins scattered over the mountains.

It was a convalescent home for sickly and puny children from all over the Southern region. If they could afford it, parents brought their children to Saluda from New Orleans, Memphis, Mobile, Atlanta. Dr. Smith took them for a month or two. They would, in Dr. Parker's words, "just bloom, eating like pigs."

He gathered some valuable experience there in the summer of 1929, which may have something to do with the events that followed that fall.

He was returning home then by car from New York, having completed his training. It was October 1929, the month of the stock market crash. He had stopped for the night at Ashville, N.C., having no idea where he was going beyond his immediate destination of Newnan, Ga.

Sitting in a rocking chair on the veranda of the Carolina Terrace that night, he overheard two men nearby. The drift of the conversation convinced him they were doctors. (There was some kind of medical meeting there.) Having nothing to lose, he walked over and introduced himself:

"Pardon me, gentlemen. I couldn't help overhearing. I just left Babies Hospital and I'm on my way home. Where would be a good place for a young man to practice?"

The physicians were Drs. Robert Strong from Hagerstown, Md., and Charles Bloom from New Orleans.

After pleasantries, Dr. Bloom told Dr. Parker that Lake Charles, Louisiana, was a coming town and that a young doctor could grow with the thriving community. Dr. Strong recommended Montgomery, Ala. Both doctors had been teaching at medical schools and had picked up these fragments of information, which were all they had to offer.

Dr. Parker drove to Newnan, where he was able to borrow $1,000 from an old family friend at the Bank of Newnan. "He had known my Dad," Dr. Parker recalls. "I had no collateral, nothing at all to put up. It was an act of faith."

After visiting his mother, promising to return Christmas Day, wherever he ended up, he drove to Montgomery in a Chevrolet coupe she had given him for his birthday. The car and the $1,000 were all he had by way of

→

capital to set up practice in those dark days of November 1929.

He arrived in Montgomery that month, knowing no one. He found his way to Merchantile Paper Co., a Montgomery landmark, and stated his case to the proprietor, Sidney Gassenheimer.

"I've had a good education and I'm honest," Dr. Parker told Mr. Gassenheimer, who reflected a moment and said, in that tone that made him a successful businessman who often had to take long shots: "I believe you are."

Mr. Gassenheimer agreed to furnish one room for the young physician if Mr. S. P. Knighten of Knighten Furniture Store would bet on another. Mr. Knighten did. Both merchants accepted small down payments and gambled on the rest.

Durr Drug Company, another old firm, said it would assume the risk too. After paying what he had to, he rented space in what was then the town's skyscraper, the Bell Building. That came to $55 for the first month's rent. He paid $4 for a phone and went back to his room at the Whitley Hotel. There, he sat on the edge of his bed and counted his bankroll.

He had $246 left and no immediate prospect for any more; he had no patients.

He was undecided. He had been courteously received so far, but should he stay in Montgomery, which was hardly beating at the door demanding his services, or go on to Lake Charles?

"I'll never forget this date or that money I had left. I had to do something quick. Well, I thought, I'd better stop here. It's far enough for me to go."

He's been in Montgomery ever since, building an unmatched reputation not only as a physician but as a civic builder and leader. (See curriculum vitae.)

Dr. △ was the other pediatrician in town and he had already cornered the market. Dr. Parker visited him and the senior physician promised to refer some patients. Dr. △ died many years later without sending Dr. Parker the first one.

Tough days were ahead for the young physician. He received only $33 in fees the first month, $22 less than his rent. Still a bachelor, he lived with other doctors for a time, rode the medical circuit on washboard roads, visiting such towns as Brundidge, Troy, Florala, and Selma, to make ends meet. At the time he was spending three-fourths of his time on the road, Montgomery having little for him to do.

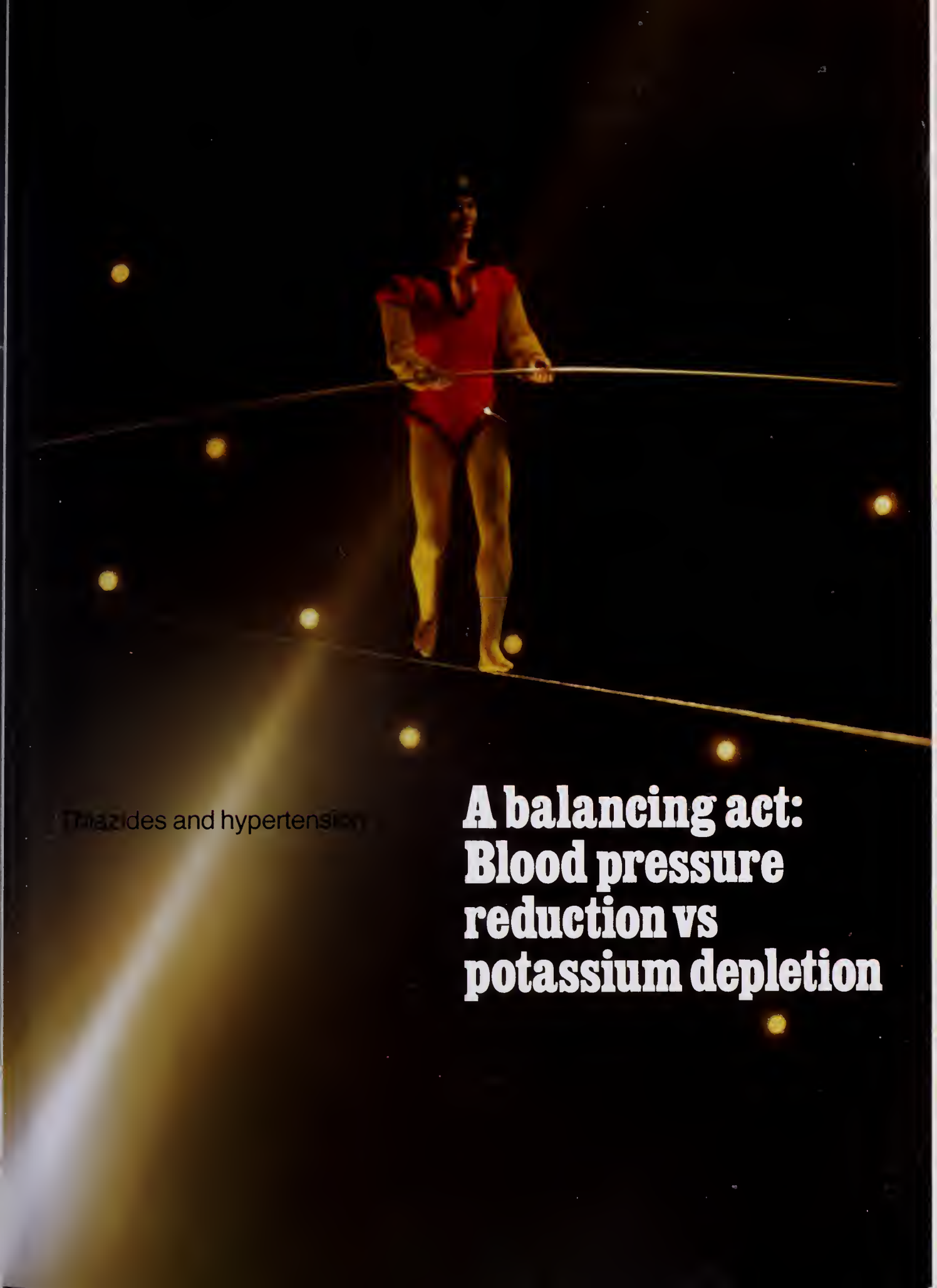
There wasn't another pediatrician then between Montgomery and Atlanta to the East, Jackson, Miss., to the West, Birmingham to the North or to the Florida line in the South, but times were hard. No one had any more money.

In a few months Dr. Parker, in

CONTINUED ON PAGE 32

ROBERT PARKER, M.D.
Curriculum Vitae

BORN:	May 16, 1902, Newnan, Georgia
MARRIED:	Ruth Hackett, 1935
CHILDREN:	Son, Robert; Daughter, Alis; Five Grandchildren
EDUCATION:	B.S. Degree, Vanderbilt University, Nashville, Tennessee, 1924. M.D. Degree, Vanderbilt University School of Medicine, 1927. Internship, Vanderbilt University Hospital, Nashville, Tennessee; Willard Parker Hospital, New York, New York. Residency, Babies Hospital, New York, New York.
MILITARY SERVICE:	U. S. Air Force, Flight Surgeon 1941-45.
RELIGIOUS AFFILIATION:	Presbyterian
PRACTICING PHYSICIAN:	50 years.
MEDICAL OFFICES HELD:	Secretary, Alabama Board of Medical Examiners 1973 to present; Life Counsellor, Medical Association of the State of Alabama; Member of Board of Censors of the Medical Association—16 years; Past President of The Montgomery County Medical Society; Member of Alabama Mental Health Board, 1966 to present; Member Alabama Health Study Commission; Member of Regional Tuberculosis Hospital Board—30 years; Member of Board of Directors Children's Center of Montgomery; Member of Advisory Board for Brain Damaged Children.
MEDICAL PUBLIC SERVICE:	Physician for Junior League Clinic—38 years; Member Junior League Advisory Board; Chairman, Health Committee, Montgomery Chamber of Commerce; Interviewer for Vanderbilt University Medical School.
COMMUNITY SERVICES:	Member, Montgomery County Board of Education; City Commissioners Committee on Community Affairs, dealing with the heart of the racial problems in the early 1960s; Board of Directors, United Appeal; Chairman of Professional Division, United Appeal; Board of Directors, Children's Center; Board of Directors, Red Cross, Montgomery Chapter; Board of Directors, YMCA, 20 years; Founder of YMCA Camp Belser; Chairman of the YMCA Camping Committee, 15 years; Mayor's Advisory Committee for Medical Services; Board of Directors, Southern Bank, N.A.
HONORS:	"The Good Side of Bob Parker"—a special occasion attended by more than 500 guests paying tribute to Dr. Parker for only one reason—thanks for being a friend and servant to so many people. 1973 1974 Recipient of the Benjamin Rush Award—presented to one physician in the United States for Outstanding Community Service. Recipient of the A. H. Robbins Award—presented to an Alabama physician for Outstanding Community Service beyond the services of a practicing physician. Man of the Year, presented for service to youth for City of Montgomery. 1953 Life Member, YMCA Board of Directors Conference Building, Montgomery "Y" Camp dedicated in honor of Dr. Parker. Proclamation from Governor of Alabama declaring "Bob Parker Day" May 7, 1973. Alabama Academy of Honor, 1976.



Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

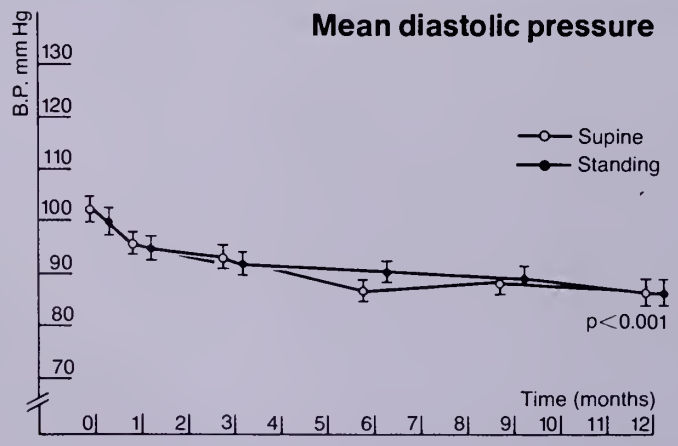
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets B.P.

Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.



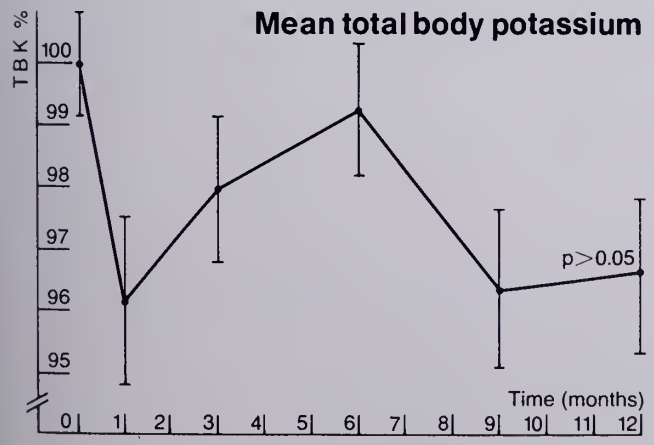
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets B.P.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day

Naturetin®

Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

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ment. Dr. William Cameron and other members of the OB/GYN Clinical Faculty ran the Health Department Clinic for two years until Dr. Daniel Shapiro, who joined the faculty full-time in obstetrics last June, took charge of the clinic this past summer.

The clinic is an outstanding example of a considerable service that would not otherwise be available to the community and that also provides a valuable learning experience for our students and residents.

Fruitful Coexistence

The OB/GYN clerkship for junior students and the OB/GYN rotation for first and third year family practice residents illustrate how traditional elements and elements that are more readily offered in a community-based school can only co-exist, but can reinforce one another to the extent that they form a unified and expanded educational experience and service opportunity.

In addition to the Health Department obstetrics clinic, where the students and residents, under faculty supervision, are privileged to see a great many sick pregnant women, students and residents also see patients in the SPMC obstetrics and gynecology clinic, which is held ten half-days a week in the school's Ambulatory Care Clinic (photo 4).

Through this general obstetrics and gynecology clinic, a large and diverse population of patients is presented for the teaching of students and residents by the full-time faculty on a one-to-one basis. The students participate along with the family practice residents in the obstetrics care and the gynecologic care of all private and service patients at Huntsville Hospital. The students and residents see private patients of the Clinical (volunteer) Faculty, who supervise this learning experience.

All this clinical experience in hospital and ambulatory settings is coordinated, for the students, with the content of the six modules into which their obstetrics and gynecology course content is organized. Each of these modules, which are identical in subject to those used at the School of Medicine in Birmingham and the College of Community Health Sciences in Tuscaloosa, deals with a distinct portion of obstetrics and gynecology and each requires a great deal of reading and a written examination.

Under the leadership of Dr. Bruce Harris, Professor and Chairman, the faculty in obstetrics and gynecology hold two series of clinical conferences, one weekly and one monthly, that are popular with local physicians as well as with students and residents. Conferences are also held every week by the faculty in pathology, radiology, pediatrics, psychiatry, and surgery. Internal medicine holds two hematology-oncology conferences a week for students only. The weekly family medicine conference provides a unifying primary care focus and perspective for the entire clinical experience.

Viable Options

The family medicine conferences and presentations are held Tuesdays from noon to 2 p.m., immediately before all junior students go to the offices of their family practice advisors. Part of the mission of the UAH School of Primary Medical Care is to "provide a superior clinical training and ... demonstrate the primary care disciplines as viable career options."

With that goal in mind, all students who complete their junior and senior years at the School of Primary Medical Care have had not only the same basic core clinical clerkshops (medicine, surgery, pediatrics, obstetrics and gynecology, psychiatry) that students on the Birmingham and Tuscaloosa campuses of the University of Alabama School of Medicine have had, but also required clerkships spent largely in the office practices of physicians delivering primary care.

In the family medicine clerkship, students spend every Tuesday afternoon throughout their junior year in the office practice of a local family physician (photo 5). In the community medicine preceptorship, students spend four weeks in the office practice of a primary care physician in one of seventeen communities ranging across North Alabama from Guin to Centre. Both clerkships provide intensive experience in continuity of comprehensive care. The clerkships also place the students in exactly the environment in which the state of Alabama intends that most of them will practice — primary care office practices in towns across the state.

The two months' preceptorship that all our family practice residents spend in the practices of Clinical Faculty members in smaller communities can develop into a more or less permanent slot that becomes built into the functioning of an office practice, just as house officer slots are essential to the functioning of many hospitals.

Drs. Walker Dempsey and Edward Rose have had a continuous succession of residents from the UAH-Huntsville Hospital Family Practice Residency Program in their practice in the Medical Clinic of Red Bay since July of 1976. The indications are that this is a mutually satisfying relationship that has acquired permanency. The school has already established a similar arrangement in Centre, Alabama, with Dr. Jack Blackwell.

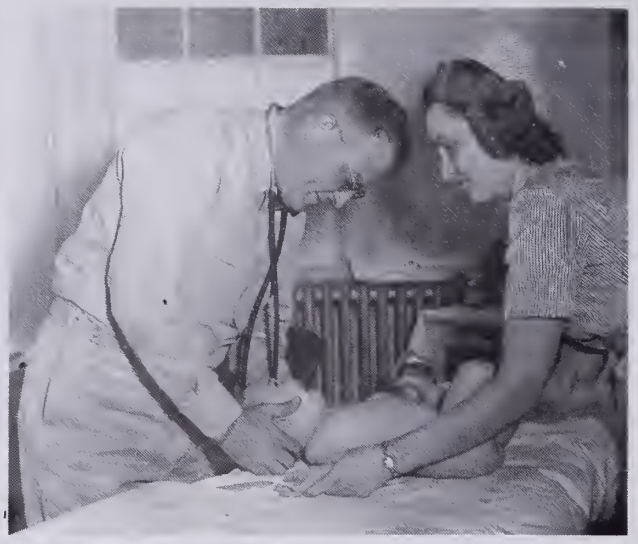
Research is another kind of partnership between practicing physicians and the University. The award of a research grant by UAH to five members of the pediatrics faculty for the study of Anaerobic Bacteria in Otitis Media constituted an acknowledgement that the three part-time faculty members of the team had won national prominence in this area of research on their own — and that under the umbrella of the University, their work could be encouraged and advanced. The fact that the two full-time faculty on the team have also published extensively in pediatric immunology has meant a combining of strengths.

It seems to me that our faculty — full-time, part-time, and volunteer—has been markedly successful on the whole at integrating traditional and more diverse teaching and learning experiences, probably because they started out four years ago this past fall thinking of the components of each clerkship and rotation as a unified entity, not as several distinct (if hopefully parallel) paths to the same end.

The result in many instances has been a synergistic effect in the true sense of that overworked word.

Come by and judge for yourself when you come to Huntsville in April for the annual MASA meeting. We look forward to showing you around the School of Primary Medical Care. □







Top left and right: World War II years. Major Parker had a little pediatrics practice while in his briefly held clinic at Maxwell Field, Montgomery. Above: Dr. Parker deserved this superintendent's hard hat for his land acquisition deal in behalf of the state Mental Health Board in 1972. To get the acreage he wanted to build the J. S. Tarwater Mental Health Center at Wetumpka, he did battle with the state as well as negotiate with local property owners. The moment recorded here was when the long fight had been won.

The best of times,

CONTINUED FROM PAGE 26

common with many people, was to lose his last dime when his bank closed its doors forever, as the Great Depression settled in for the dark period that never really ended until World War II in the South.

He worked hard and gained the confidence of a Montgomery physician of the old school, the sainted Dr. Hilton Rice, who told him he couldn't afford to give any patients away but would let him look after his practice if he was ever away.

The big break came from misfortune: Dr. Rice was stricken with complications from an appendectomy. He was out several months; Dr. Parker took care of his patients. Shortly thereafter, Dr. Rice died in his office and many of his patients (my father was one of them) turned to Dr. Parker.

Things were looking up. Dr. Parker opened offices in an old apartment building near Court Square, staying there 30 years. He had a well-remembered reception room, treatment rooms, X-ray and lab, and a marvelous lady for his nurse, Ruth Hackett, whom I knew only as "Miss Hackett." He married this lovely lady in 1935, to the dismay of all the town's belles, who regarded him, my mother later told me, as the prime catch on the horizon.

I remember the tender concern of Miss Hackett when she came out every day for weeks in the most dreadful summer of my life to give my daily rabies vaccine.

My dog had gone mad. Simultaneously, I had contracted a roaring case of chicken pox. I couldn't get to Dr. Parker's office. Wherever Miss Hackett would jab me in the belly, in spite of her tenderness, a new pock would form.

the worst of times . . .

It hurt so much to scratch through the long, sweltering, sleepless nights, I used a hair brush, thoroughly flaying my belly and creating even more secondary problems for Dr. Parker and Miss Hackett.

The years passed. Dr. Parker, thousands of babies later, went into the service for four years, emerging a colonel in 1945. While in the service he renewed his old interest in flying, those days when he would while away his Saturday afternoons spending what little money he had made tooling around the skies over Montgomery in those frail craft of the 1930s, including the famous Ford tri-motor he once commandeered to visit my brother in a Birmingham hospital. (An unusual visit for the time, perhaps, but not for Dr. Parker, who once drove half the night to Russellville in North Alabama, to puncture a baby with meningitis at midnight, returning to Montgomery just after dawn to put in a full day's work.)

Stationed at Maxwell in Montgomery, and at one time at Benning, Dr. Parker became disturbed over the manpower loss of men rejected for service because of venereal disease. He contrived a plan to induct them anyway, isolate them in a compound while treatment was carried out, and then press them into service in Europe and the Pacific as his "Rough Riders," after Teddy Roosevelt. The division so formed would be called the 606, after the syphilis treatment of the period.

Turned down at Benning, Dr. (then Major) Parker took his case to Washington, where the Surgeon General heard his story, seemed to agree in principle, but turned him down with this stern word of advice:

"Major Parker, you should learn that you are never to ask a general officer a question for which, according to the book, the only answer is no. Whatever my personal feelings, the answer is no."

After the war, Dr. Parker resumed his busy practice and, it is said, never turned down a new patient, who came now in droves. Three years ago, he retired from active practice to become Executive Secretary to the Board of Medical Examiners.

Dr. Parker's explosive laughter frequently fills the MASA building. Despite a fractured back, resulting from a hunting misadventure around Christmas, he still holds court every day — formally, for his duties to the Board, and informally, when he regales the MASA staff during coffee breaks with stories of the great and near great, the high and mighty, the meek and humble.

He is, as he has always been, a wondrously happy man, to whom adversity is only another of nature's trials for him to laugh at.

Life has been good to him, as he will tell you with emphasis, but he has been good to life, the life he made for himself in Montgomery and in Alabama.

As a journalist, I watched Dr. Parker's career from World War II to the present. It is impossible to capsule all he has done, all he has meant to his city and state. Suffice it to say that it was one of the happier accidents of this historic city that he overheard that conversation on the veranda of the Carolina Terrace in November 1929.

Not to put too fine a point on it, few have given back so infinitely more than they took from life. □

"It was the best of times, it was the worst of times,
it was the age of wisdom, it was the age of foolishness,
it was the epoch of belief, it was the epoch of incredulity,
it was the season of Light, it was the season of Darkness,
it was the spring of hope, it was the winter of despair."

— Charles Dickens

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Abdominal Masses In Infants And Children

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Introduction

The diagnosis of an abdominal mass in a child or infant presents a serious challenge to the physician. The proper evaluation of such a patient is all-important and significantly influences the decision for surgery.

An analysis of 100 patients who presented with the primary diagnosis of "abdominal mass" at the Childrens Hospital in Birmingham was performed. This review was done in an attempt to determine the spectrum of diseases presenting with this primary diagnosis in our hospital and to determine which tests were most useful in (1) determining the need for surgery and, (2) confirming the diagnosis preoperatively.

Material And Methods

The records of 100 children treated or seen on the surgical service between January, 1967 and January, 1976 were reviewed retrospectively. Those children who were referred to our hospital for hematologic disorders who incidentally had hepatosplenomegaly were excluded.

Only those patients who had abdominal masses as their primary diagnosis were considered. Fifty-seven were females and 43 were males. Nineteen patients were infants (less than one year of age) and the remainder were young children. Surgery was performed in the majority of these patients, of course, dependent on the preoperative diagnosis. The diagnoses by major organ system are listed in Table 1.

TABLE 1. ETIOLOGIES OF ABDOMINAL MASSES IN INFANTS AND CHILDREN

	No. Pts.	Incidence
Renal-Perinephric (57)		57%
Wilm's Tumor	20	
Neuroblastoma	19	
Hydronephrosis	8	
Multicystic Kidney	4	
Polycystic Kidney	3	
Miscellaneous (Uroma, Megaureter, Hematoma)	3	
Ovarian (15)		15%
Teratoma	8	
Dermoid Cyst	4	
Torsion and Cyst	3	
Spleen (14)		14%
Splenomegaly	13	
Splenic Cyst	1	
Liver (5)		5%
Hepatomegaly	2	
Hepatoma	2	
Hemangioma	1	
Gastrointestinal (7)		7%
Mesenteric Cyst	4	
Intussusception	2	
Omental Cyst	1	
Lymphangioma	2	2%
	100	100%

Results

Genitourinary (72 Patients)

Fifty-seven patients had masses involving the kidney, ureter or perinephric sympathetic chain; an additional fifteen patients had tumors involving the ovaries.

Wilm's tumor (20 patients): This diagnosis was confirmed in 15 children (75%) and five infants (25%), with a mean age of 2.7 years (range 8.5 months - 13.5 years). Eleven (55%) were located in the right kidney, nine (45%) on the left.

All of these children had palpable abdominal masses, one had pulmonary metastasis when first seen, one had peritoneal implants, and one had metastasis to the right femur. Hematuria was present in five children and was generally correlated with venous invasion and more advanced

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lesions.[1] Intravenous pyelography was "positive for renal tumor" in all patients, was interpreted as showing malignant disease in 15 patients (75%) and benign disease in five patients (25%).

All of these children underwent abdominal exploration, 17 for cure, and three for diagnosis and attempted palliative removal of large bulky lesions. Pathological findings ranged from well-incapsulated lesions to venous invasion and vena caval involvement. There was no operative mortality; four children (20%) have subsequently died, including the three who presented with metastatic disease.

Neuroblastoma (19 patients): Four infants and fifteen children with a mean age of 2.2 years (range 1 day - ten years) had this diagnosis confirmed. Thirteen of the tumors were located on the left side and six on the right. Intravenous pyelography was performed in all patients of whom 18 (94%) had findings which were considered abnormal. Five patients (26%) had the classical picture of calcifications in a mass lesion on plain abdominal x-ray.[1] Two of the patients had metastatic disease at the time of diagnosis including pulmonary metastasis and bony metastasis to the lumbosacral spine and humerus. One patient presented with a large thoracic mass who underwent exploration and was unresectable. This patient had irradiation and subsequent resolution of this mass; later he presented with a left perinephric mass, also neuroblastoma, which was successfully removed. It is presumed that the thoracic lesion was metastatic from a small non-palpable lesion in the abdomen. One patient died postoperatively and the two patients with metastatic disease have both died.

Hydronephrosis (8 patients): Two infants and six children with a mean age of 4.1 years (range 4 months - 11 years) were included in this group. Hydronephrosis involved the right kidney in five patients and the left kidney in four patients (bilateral in one patient). Intravenous pyelography was diagnostic in seven patients (87%) and showed only a nonfunctional kidney in one patient. Two patients underwent surgery, one for recurrent infections, and for diagnosis in the other patient who had a nonfunctional kidney. There was no operative mortality and 7/8 patients (87%) are alive and well.

Multicystic kidney (4 patients): Two children and two infants with a mean age of 2.4 years (range 8 months - 3½ years) were included in this group. Intravenous pyelography was diagnostic in all patients. There was no operative mortality and all of these children are alive and well.

Polycystic kidney (3 patients): This diagnosis was confirmed in one infant and two children with the mean age of 2.8 years (range 8 months - 5.5 years). All of these lesions were located in the right kidney and all of the patients had diagnostic excretory urograms. Again there was no operative mortality and all of these patients are well.

Miscellaneous renal lesions (3 patients): The diagnosis of uroma was made in one patient and megaureter in another patient by excretory urogram. Another patient had a history of blunt abdominal trauma and was found to have a large perinephric hematoma which had been suggested preoperatively by intravenous pyelogram and a renal arteriogram. All of these patients survived.

Ovarian (15 Patients)

Teratoma (8 patients): Benign teratomas were diagnosed in eight children and plain film of the abdomen showed calcifications[2] in three (37%) of these patients. One interesting patient had a benign teratoma, but had peritoneal implants suggestive of malignancy. Biopsy of these peritoneal implants revealed mature glial cells. As noted by others[3,4] this finding has not been associated with a poor prognosis. This baby has done well with no evidence of metastatic disease in two years.

Dermoid cyst (4 patients): Dermoid cysts were diagnosed by plain abdominal films which showed calcifications and teeth in all four patients.

Torsion of overy and cyst (3 patients): This diagnosis was confirmed at surgery and plain abdominal films and excretory urogram were not helpful. All these patients have survived and done well.

Spleen (14 Patients)

Splenomegaly (13 patients): Splenomegaly was confirmed in four infants and nine children with a mean age of 4.5 years (range one month - 9.5 years). Splenomegaly was associated with hepatomegaly in six patients, four of whom proved to have Hodgkin's disease and one proved to have Histiocytosis X. Three patients were determined to have viral infections as the origin of their splenomegaly which resolved spontaneously. Cirrhosis and portal hypertension with secondary splenomegaly was confirmed in three patients. Hemolytic anemia was responsible for splenomegaly in one patient.

Splenic cyst (1 patient): One splenic cyst was diagnosed in a patient aged three years by selective splenic arteriography.

Liver (5 patients)

Hepatomegaly (2 patients): Isolated hepatomegaly was diagnosed in two children, one with alpha-1-antitrypsin deficiency and one with Hodgkin's disease. Those patients who had combined

hepatosplenomegaly (primarily from hematologic disorders) were omitted from this group.

Hemangioma (1 patient): Hemangioma was diagnosed in one patient by liver scan.

Hepatoma (2 patients): Malignant hepatoma was diagnosed in two patients, one with heptocellular carcinoma and the other with a hepatoblastoma. Liver scans were positive in both of these patients and both have succumbed to metastatic disease.

Gastrointestinal (7 Patients)

Mesenteric cyst (4 patients): Mesenteric cysts were diagnosed in four children and all have done well postoperatively. Plain films of the abdomen were highly suggestive of mesenteric cyst including two patients who had a calcified mass, one patient who had massive small bowel displacement and another patient who had a right lower quadrant mass and partial ileal obstruction.[5]

Intussusception (2 patients): Ileocolic intussusception presented as a mass lesion in two children, and was diagnosed by barium enema; one was successfully reduced by barium enema. One patient required ileocolectomy and survived. The two cases represent approximately 2% of the total number of patients with intussusception seen during the study period.

Omental cyst (1 patient): This patient was diagnosed by barium enema which showed abnormal fixation of the mesentery who survived excision of the cyst and has done well.

Discussion

The challenging problem of an undiagnosed abdominal mass in a child is not uncommon. Importantly, at least half of all abdominal masses in children are non-surgical problems.[5] At least 50% of all these lesions are of genitourinary origin[5,6] and, in fact, 57% of our series were of urinary origin and an additional 15% were of ovarian origin. Hydronephrosis accounts for about half of the renal lesions in most series[6] and accounted for about 20% of the renal lesions in this series.

More importantly however, Wilm's tumor and neuroblastoma accounted for 39 of the 57 (69%) renal and perinephric lesions in this series and the diagnostic and prognostic implications of these lesions are obvious. Interestingly, virtually all (55/57, 94%) of the renal-perinephric lesions seen were at least partially diagnosed preoperatively by the simple and safe test of intravenous pyelogram. Even when the intravenous pyelogram was incorrect as to the precise diagnosis, it permitted lateralization and an accurate estimate of size of the lesion.

Of the ovarian lesions in this series, none was malignant and seven of 15 (47%) were diagnosed by plain abdominal roentgenograms.

Hepatic lesions required special studies; i.e., liver scan for diagnosis. Plain abdominal roentgenograms were diagnostic or suggestive in most of the gastrointestinal lesions; barium enema confirmed the diagnosis of intussusception in two patients.

We would, therefore, conclude that most of the abdominal masses in children can be diagnosed by simple means. The combination of plain abdominal roentgenogram and excretory urogram yielded diagnoses in 66 patients (66%) in this series. Barium enema yielded correct diagnoses in three additional patients and liver scan an additional three diagnoses. Arteriography was used rarely (1 patient). Some lesions, splenomegaly or large pelvic or lower abdominal masses, will be clearly non-surgical or surgical lesions clinically and precise diagnoses are not necessary.

Thus we would recommend that all children who present with abdominal masses have plain abdominal roentgenograms and excretory urograms prior to proceeding to further studies. Upper abdominal lesions that are not diagnosed by these means may require further, more invasive tests for diagnosis, but surgical exploration is probably warrented unless splenomegaly is the apparent lesion. Lower abdominal masses, not diagnosed by these means, should be explored without further tests. □

BIBLIOGRAPHY

1. Mahour, G. H., Lynn, H. B., "Clinical Review — Tumors in Infancy and Childhood" Minnesota Medicine, 52:1679, October, 1969.
2. Carney, J. A., Thompson, D. P., Johnson, C. L., Lynn, H. B., "Teratomas in Children: Clinical and Pathologic Aspects:" Journal of Pediatric Surgery, 7:271, June, 1972.
3. Robboy, S. J., Scully, R. E., "Ovarian Teratoma with Glial Implants on the Peritoneum, An Analysis of 12 Cases" Human Pathology, 1:643, December, 1970.
4. Wisniewski, M., Deppisch, L. M., "Solid Teratomas of the Ovary" Cancer, 32:440, August, 1973.
5. Longino, L. A., Martin, L. W., "Abdominal Masses in the Newborn Infant" Pediatrics, 21:596, April, 1958.
6. Melicow, M. M., Uson, A. C., "Palpable Abdominal Masses in Infants and Children: A Report Based on a Review of 653 Cases" Journal of Urology, 81:705, June, 1959.

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Autoimmune Hemolytic Anemia

Thomas W. Sheehy, M.D.*

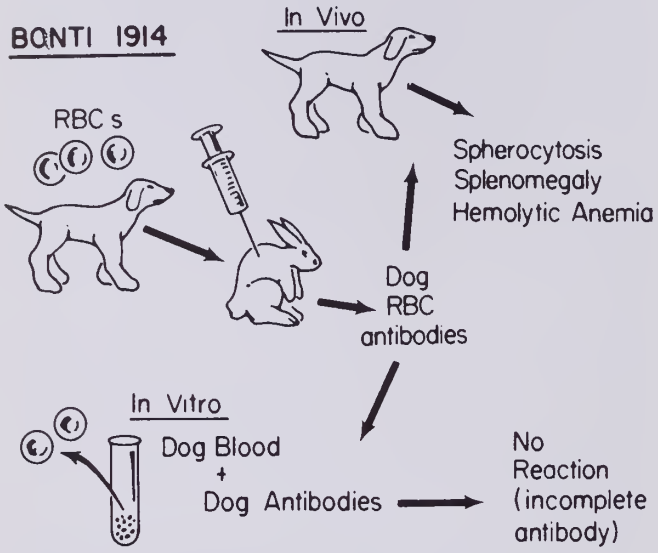


FIGURE 1.

Autoimmune hemolytic anemia (AIHA) has been and is a continuing puzzle for many clinicians. Fortunately, for all of us, the pathophysiology of AIHA is slowly but surely becoming clearer. Hopefully, this paper will help to clarify it further. To do this, the significance of the Coombs test and the paths of red cell destruction in AIHA are reviewed. Two patients, one with warm and one with cold AIHA, serve as the base for this review.

Patient 1. *This 28-year-old male was seen on Aug. 22, 1977, with complaints of dizziness, weakness, and fatigue.*

On August 1, he developed a flu-like illness which lasted several days but did not deter him from going on a two-week vacation in Michigan. While there he took 10 to 20 aspirins daily for myalgia and a low grade fever. After returning home, his symptoms persisted and he sought medical advice.

On physical examination, he was found to be slightly icteric with normal blood pressure, pulse, and respirations. Flame-shaped hemorrhages were noted in both retina and petechae were observed on the buccal mucosa, oral pharynx, conjunctivae, and extremities. A sinus tachycardia, 120/minute, a Grade 2/6 systolic murmur, and splenomegaly were also observed.

The family history and drug history were unremarkable.

LABORATORY DATA: PVC 17%, hemoglobin 6%; RBC 1.6/m1³; WBC 12,600/ml³; normal differential; platelets 7,000/ml³; MCV 109; MCHC 33; prothrombin time normal; uric acid 8.4 mg%; LDH 1,075 units; SGOT 66 IU; total bilirubin 2.7 mg%; indirect 1.0 mg%; ANA negative; LE prep negative; RA factor negative; Coombs test, direct and indirect positive; ASO titer 1:100; G6PD normal; C_3 1/160; cold agglutinins positive 1:4; haptoglobin 0%; hemoglobin electrophoresis AA; monospot test negative.

This patient's diagnosis was Evan's Syndrome, i.e., autoimmune hemolytic anemia, plus thrombocytopenia. Initial treatment consisted of prednisone, 100 mg. daily. Only minimal improvement was observed after two weeks therapy and when the patient's platelets dropped to less than 2000 ml³, splenectomy was performed. Ten days later, the patient's hematocrit had risen from 26% to 38% and his platelet count from 2,000 to 110,000 ml³.

The patient's autoimmune hemolytic anemia was characterized by a Coombs test positive for both warm antibodies and complement.

Discussion

The history of AIHA began with Donath and Landsteiner's observations in 1904 that sera from patients with paroxysmal cold hemoglobinuria contained an active factor that destroyed red blood cells in the cold[1]. It continued with Banti's key observation in 1913[2]. He immunized rabbits with *red blood cells* taken from a dog and subsequently injected these antidog red cell antibodies into other dogs. The recipient animals quickly developed spherocytosis, splenomegaly, and a hemolytic anemia (Fig. 1).

However, when this same experiment was attempted in vitro, nothing happened. There was no evidence of hemolysis, spherocytosis, or agglutination. This led to the introduction of the term "incomplete" antibody which simply refers to antibodies that are hemolytic in vivo but apparently nonreactive or non-agglutinating in saline.

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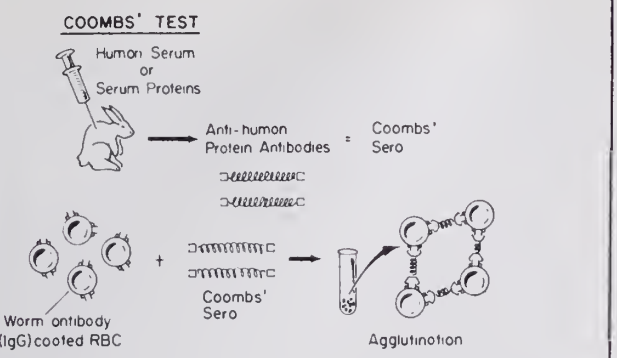


FIGURE 2.

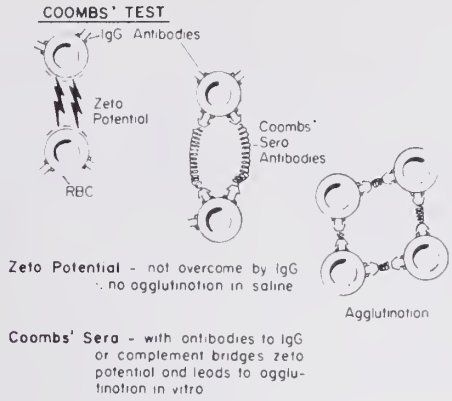


FIGURE 3.

Coombs Test

Thirty years later, Coombs provided further information on the nature of "incomplete" antibodies with the discovery of the antiglobulin test that now bears his name. This test has been and is extremely valuable in detecting the presence of globulin antibodies or complement on the red cell membrane[3]. Unlike Banti, Coombs prepared antibodies by immunizing rabbits with human *plasma* rather than red cells (Fig. 2). As a result, the injected rabbits produced antibodies not to red cells but to gamma globulin, complement, and to other injected plasma proteins.

In the "direct" Coombs test, rabbit sera containing heterogenous antibodies against human plasma proteins is mixed with washed red cells from a patient with AIHA. Those erythrocytes coated with IgG (incomplete) antibodies agglutinate in vitro. By interacting with the IgG antibodies on red cells, the antiglobulin rabbit antibodies in the Coombs sera make the incomplete (invisible) antibodies (visible) agglutinate. How this happens is explained later. The degree of agglutination is viewed and graded macroscopically and/or microscopically.

Thereafter, a positive Coombs test was interpreted as depicting the presence of IgG antibodies on patient red cells[4]. Later, a "non-gamma" Coombs test was developed. "Non-gamma" refers to the use of Coombs sera that had been absorbed purposefully with IgG to remove it, leaving complement behind and thus creating a complement-specific Coombs sera.

Hence, a positive "non-gamma" Coombs test usually implied the presence of complement on the red cell surface, while a "gamma" test implied the presence of IgG molecules. Fortunately, these confusing terms have been dropped for the more specific "IgG" positive or "complement" positive (anti-C_3 or anti-C_4) Coombs test[4].

In the "indirect" Coombs test, patient serum is tested for antibodies by incubation with *normal* red cells. Any antibodies deposited on the normal red cells are then detected by incubating these erythrocytes with Coombs sera. Agglutination occurs if the normal red cells were coated with antibodies during exposure to the patient's serum. At this point, it is important to emphasize that a positive "direct" and "indirect" Coombs suggests an abundance of antibody in the patient's plasma as well as on the red cell.

However, a negative "direct" Coombs and a positive "indirect" test in a well patient is not significant clinically. It merely implies that somewhere, sometime in the past, the patient developed antibodies which are still present but are not attached to the patient's red cells. A variant of the "indirect" Coombs is used every day in blood banks for routine blood typing.

The Coombs Sera And In Vitro Agglutination

One might reasonably ask how did the Coombs sera make "invisible" antibodies "visible" in the test tube?

Normally, red cells repulse one another because of their Zeta potential[5]. This force is generated by cations surrounding the red cells and by the negative surface charge on the red cell membrane created by sialic acid residues. It is largely responsible for keeping red cells in suspension and maintaining a minimal cellular distance of 250A°. (Fig. 3).

IgM antibodies are not only capable of overcoming a Zeta potential of 17 to 20 millivolts but they are physically large (300A°) enough to bridge the 250A° gap between cells and to cause visible agglutination in vitro. They are "complete" antibodies.

IgG antibodies can only generate a potential of 8 to 9 millivolts and they are not large enough to bridge the intracellular red cell gap[6]. However, when the anti-globulin antibodies in Coombs sera combine with IgG antibodies attached to the red

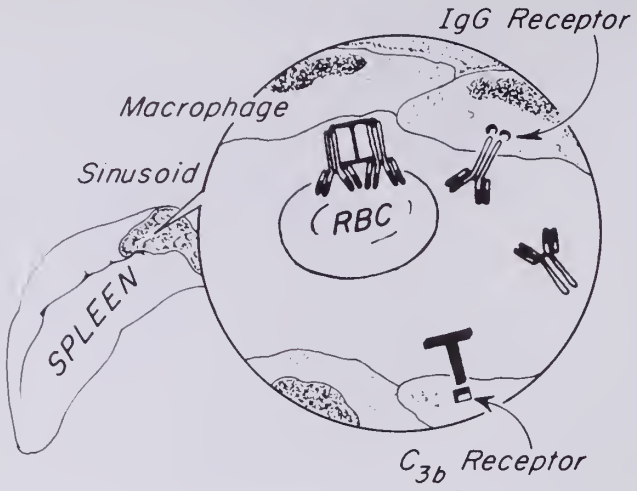


Figure 4 depicts a red cell bearing two molecules of IgG in proper arrangement and binding one molecule of C_1. Receptor sites are also shown on the splenic macrophages for C_{3b} and IgG. When a red cell bearing either C_{3b} or IgG becomes fixed to these macrophage receptor sites, red cell phagocytosis and destruction occurs.

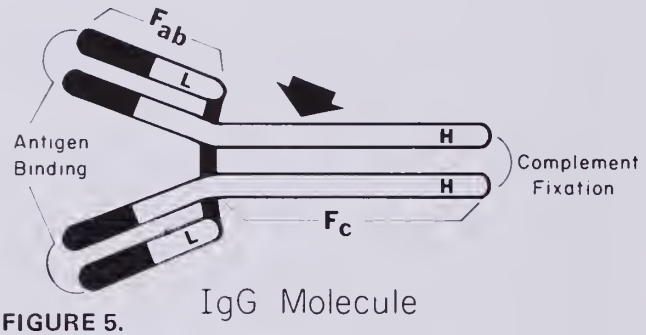


FIGURE 5.

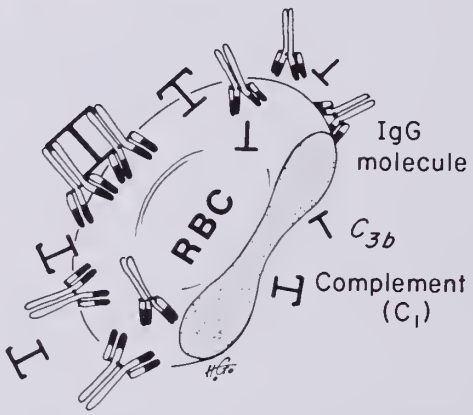


Figure 6—This schematic shows C_1, activated C_{3b}, and IgG on or about a red cell. Two molecules of IgG in proper spatial arrangement have bound one molecule of C_1 and activated it. When activated C_{3b} becomes fixed to a red cell's membrane, the stage is set for its destruction by splenic or hepatic macrophages. Red cells with only IgG on their surface are also fixed by splenic macrophages to special receptor sites (Figure 4) and destroyed. However, for destruction of a red cell to occur as a result of only IgG, large numbers of IgG molecules must be present on the red cell's surface.

cell membrane, they may create a force sufficient to overcome the Zeta potential. Joined together both antibodies are large enough to bridge the 250A° distance separating red cells.

Sensitivity Of Coombs Test

Initially, the "direct" Coombs test was relatively insensitive and was positive only when 100 to 500 warm antibodies were present on each red cell[7] Yet, it was obvious that fewer antibodies per red cell could cause significant hemolysis, e.g., only 10Rh antibodies per cell can reduce the T-1/2 red cell survival to three days[8].

Since suspected AIHA was often encountered in patients with a negative Coombs test, attempts were made to devise a more sensitive Coombs sera[9] Colloids, such as albumin and dextran, were used in vitro to reduce the Zeta potential. Enzymes, such as neuramanidase, were used to remove sialic acid residues from the red cell membrane. However, none of these agents were highly effective. Finally, polybrene (hexadimethrine bromide) an antiheparin, was evaluated and found remarkably effective in increasing the sensitivity of the Coombs test[10]. The automated polybrene test is sometimes capable of detecting as little as one molecule of antibody per red cell. This test is most sensitive to Rh-type antibodies and least sensitive to IgM antibodies. Polybrene is thought to reduce the intracellular distance and to bring antibodies closer to the antigen binding sites on the red blood cells, thus converting a non-agglutinating to an agglutinating red cell antigen-antibody reaction.

Red Cell Destruction In (Warm) AIHA

Three mechanisms exist for red cell destruction in AIHA. Red cell survival can be decreased by (1) antibody alone; (2) by complement alone; and (3) by an interaction between IgG antibodies and complement.

IgG Antibody Destruction

Earlier observations suggested that erythrocytes coated with IgG antibodies were destroyed primarily by splenic macrophages, while red cells coated with IgM (cold) antibodies were eliminated mainly by the hepatic Kupffer cells, i.e., splenic versus hepatic cellular destruction[11,12]. Usually, the degree of hemolysis was also related to antibody concentration on the red cell. The greater the number of IgG antibodies per red cell, the higher the rate of red cell destruction. Recently, the type of antigen, its location on the red cell membrane, as well as antibody concentration, were found to be important factors influencing the rate of phagocytosis[13,14].

Splenic destruction of red cells occurs via tissue phagocytosis. Splenic macrophages possess two types of receptors[15,16]. One is specific for IgG

antibodies on red cells (Fig. 4), while the other captures red cells bearing activated C_{3b} complement on their surface. When a red cell coated with IgG or C_{3b} or both is fixed by a macrophage receptor, sequestration and phagocytic destruction of the red cell usually follows.

Erythrocytes fortunate enough to escape from a tissue macrophage, usually do so by sacrificing part of their membrane. The resultant loss decreases their surface to volume ratio causing them to assume the shape of a spherocyte, the sine que non of AIHA. Of course, as a spherocyte, these red cells are susceptible to splenic sequestration and destruction.

Ordinarily, the greater the number of IgG antibodies per cell, the greater the chance for fixation and phagocytosis[14]. However, without complement activation, splenic clearance or destruction of IgG coated antibodies is relatively inefficient and hundreds of thousands of IgG molecules are needed per red cell.

Types Of IgG Antibodies And AIHA

Just as there are two key phagocytic receptor sites, there are two subclasses of IgG that permit maximal phagocytic binding[17]. Of the four subgroups of IgG, IgG_1 and IgG_3 are the subgroups usually associated with AIHA. IgG_1 antibodies are found in 80 percent of patients with AIHA, while IgG_3 antibodies are detected in 15 percent. IgG_2 and IgG_4 antibodies are seldom responsible for AIHA[18]. The reason for this peculiar affinity is still not known.

IgG Antibody Plus Complement Destruction

Until recently, complement fixation was considered a relatively rare event in warm AIHA. This is no longer true. Schrieber and his associates recently discovered the guinea pig was an excellent model in which to study AIHA[19]. Using this model, as well as human volunteers, they were able to throw additional light on the pathophysiology of warm AIHA and on the interrelationship of antibody and complement fixation.

^{51}Cr-labelled guinea pig erythrocytes were sensitized with either IgG or IgM anti-guinea pig erythrocyte antibody prepared in rabbits. These radioactive labelled, sensitized cells were then infused into normal guinea pigs and their rate and pattern of clearance determined[20]. When IgG sensitized ^{51}Cr-labelled cells were given to normal guinea pigs, the labelled cells were cleared from the circulation within *1 to 2 hours* by the spleen without evidence of significant plasma hemolysis. Complement (C_4) deficient guinea pigs injected with similarly sensitized ^{51}Cr-labelled cells also cleared IgG coated erythrocytes via the spleen *but at a much slower rate.*

Similar studies carried out in normal volunteers and in patients with significantly depressed levels of C_4 yielded the same sequence of events. It appears that IgG and C_3 receptors interacted synergestically to bind and to detect red cells coated with IgG and C_3, thus increasing the rate of red cell destruction. Studies in C_3 deficient animals also indicated that complement activation was mediated by the classical rather than the alternate "properdin" pathway.

Both the spleen and the liver (Kupffer cells) macrophages have receptors for C_{3b}. Hence, if large numbers of red cells are coated with activated C_{3b}, hepatic sequestration and destruction becomes significant and at times dominant.

IgG Antibody And Complement Interaction

Once the Fab portion of the IgG antibody binds to the antigen site on the red cell membrane, part of its heavy chain becomes available for complement binding. (Fig. 5). However, this is not a simple get-together. IgG molecules have only one binding site per molecule and complement binding requires two activated binding sites in close proximity. Thus, two adjacent molecules of IgG, with sufficient affinity for complement binding and in the proper spatial arrangement, are necessary to bind one molecule of complement[21,22] (Fig. 6) In contrast, one molecule of IgM can bind one molecule of complement. If IgG molecules are scattered randomly on the red cell surface, sufficient doublets of IgG may not be available for binding. On the other hand, if only a few IgG molecules are clustered at one site on the red cell membrane, binding may occur in the presence of a relatively low surface concentration of IgG molecules. Interestingly, IgG_3 and IgG_1, the subtypes most often responsible for AIHA, have the greatest affinity for complement, while IgG_2 and IgG_4 have relatively little affinity for it.

It has been estimated that perhaps 2,000 to 5,000 molecules of IgG per red cell are necessary to bind as much complement as 25 molecules of IgM per cell. Whatever the number of IgG molecules necessary, once complement binding is initiated, the early phase of the complement cascade is set in motion[23]. C_{1q} activates C_4 and C_2. C_4 becomes bound to the surface membrane while C_2 binds to C_4. C_2, in turns, activates C_3 which also binds to the cell membrane. C_3 binding constitutes the first mechanism for red cell destruction by complement. C_3 cleavage by C_2 produces C_{3a} and C_{3b} which adhere tightly to the red cell membrane (Fig. 7).

Both splenic and hepatic macrophages have C_{3b} receptor sites. Therefore, any red cell labelled with C_{3b} becomes fair game for phagocytosis. →

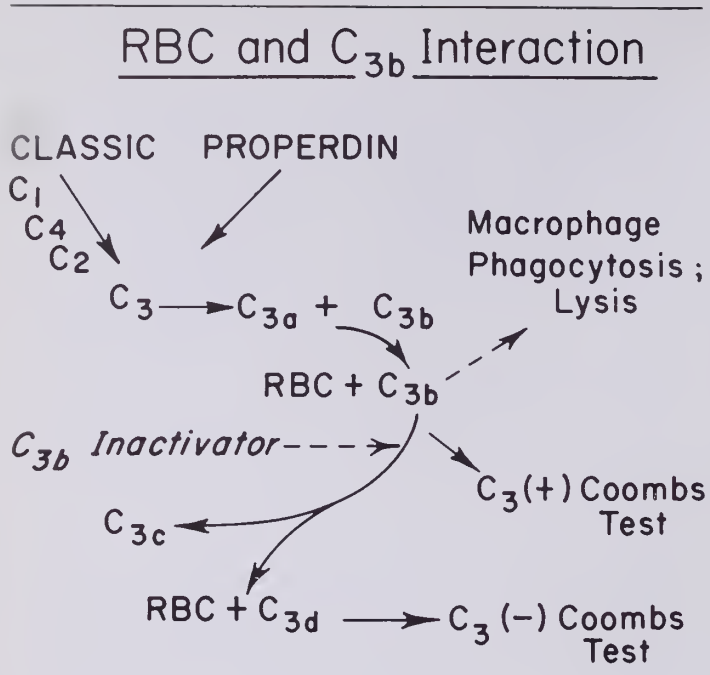


Figure 7—With complement activation, C_3 is cleaved via the classic or alternate pathway into C_{3a} and C_{3b}. C_{3b} binds tightly to the red cell membrane and its presence on the red cell surface allows aplenic or hepatic macrophages to fix and to phagocytize these red cells. Normally, the plasma C_{3b} inactivator cleaves C_{3b} into C_{3c} & C_{3d} thereby presenting phagocytosis. Phagocytosis can not occur after the cleavage of C_{3b} because the macrophages have no receptor sites for C_{3c} or C_{3d} on their surface.

Phagocytosis of C_{3b} labelled red cells occurs unless the *normal* plasma C_{3b} inactivator cleaves the C_{3b} on the cell membrane into C_{3c} or C_{3d}. Such cleavage leads to the release of C_{3b} coated cells from the tissue macrophages. There are no macrophage receptors for C_{3c} or C_{3d}. Therefore, red cells carrying the C_{3d} marker on their surface are immune to further phagocytosis and they live a normal life span. (Figure 7)

In the presence of large numbers of red cells bearing surface active C_{3b}, the plasma C_{3b} inactivator may become depleted. When this happens, phagocytosis of C_{3b} coated erythrocytes is unimpaired and it may occur in both the spleen and the liver.

It should be obvious by now that splenectomy, by removing the splenic macrophages with their receptors for the Fc portion of IgG and for C_{3b}, allow circulating red cells to exist with high antibody concentrations on their surface.

Complement Lysis

The activation of complement alone can lead to red cell destruction by direct membrane puncture. Following the binding of C_{3b} to the red cell membrane, the complement cascade may go to completion. When it does, complement complexes C_5 and C_7 are partially inserted into the red cell membrane while C_8 and C_9 are submerged into the lipid bilayer of the red cell[17]. This creates a defect in the red cell membrane which permits potassium to leak from the cell and sodium to enter. Membrane lesions produuced by human complement alone are large enough (50A°) to permit escape of hemoglobin[24]. If the erythrocyte membrane lesion is smaller than 50A°, destruction can still take place by colloidal osmosis. (Fig. 8)

Although complement and IgG antibodies each are capable of causing red cell destruction both are relatively inefficient. Between 5,000 to 40,000 molecules of C_5 per red cell are necessary to produce a significant membrane lesion.

Characteristics Of The IgG Antibody

IgG antibodies have certain characteristics. They are warm antibodies, i.e., they react best in vitro at 37°C. Other distinctive features are (1) a low molecular weight, 160,000MW-7S; (2) less dependence on complement fixation for hemolysis than IgM. (3) failure to cause agglutination in saline; (4) primarily extravascular destruction of red cells by the splenic macrophages in the RE system; (5) in vitro detection by specific IgG Coombs test; and (6) the presence of extra receptor sites on red cells.

Etiology

Warm antibody AIHA. While all the causes of AIHA are not known, it is obvious that it usually occurs in patients with serious illness. Only about 18 percent of patients have the idiopathic AIHA[25]. The remainder have AIHA secondary to malignancies or to other serious illnesses. Leukemia, lymphoma, and myeloma account for 48 percent of secondary AIHAs; other malignancies account for an additional 8.5 percent. Collagen vascular disease is responsible for 15 percent, thyroid disease for 11 percent, infection for 23% percent, and gastrointestinal disease for 12 percent.

Since malignancies account for over one-half of AIHAs, mortality is extremely high in these patients. Distressingly, AIHA may develop years before the clinical appearance of an underlying disorder, such as lymphoma, myeloma, or collagen vascular disease. In contrast, mortality is relatively low in patients with AIHA secondary to thyrotoxicosis or infection.

Clinical Aspects

The annual incidence of AIHA is approximately one case per 75,000 population. Warm AIHA may occur in the aged but about 75 percent are over 40 years of age. Peak incidence occurs between 60 and 70 years[25].

Since AIHA occurs in association with various diseases, the symptoms and signs vary. Symptoms

CONTINUED ON PAGE 48

When pain complicates acute cystitis*

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl

for the pain for the pathogens



□ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

□ **Effective control of susceptible pathogens** such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris.*

□ **Appropriate antibacterial therapy:** up to three days therapy with Azo Gantanol, then 11 days with Gantanol® (sulfamethoxazole), 0.5 Gm tablets.

*Nonobstructed; due to susceptible organisms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

Note: **Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

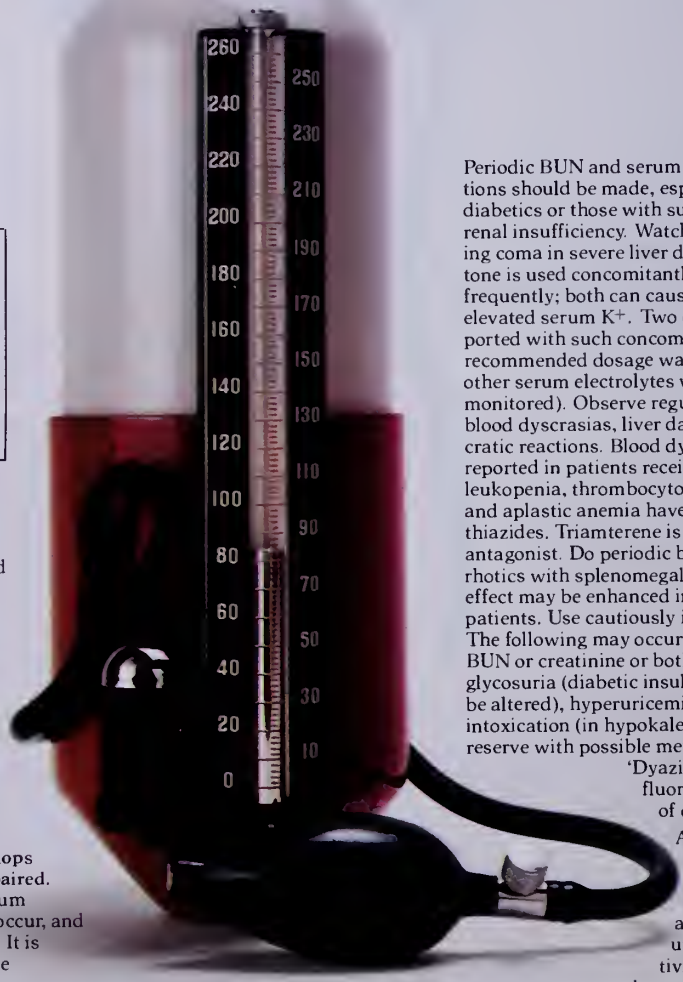
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TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

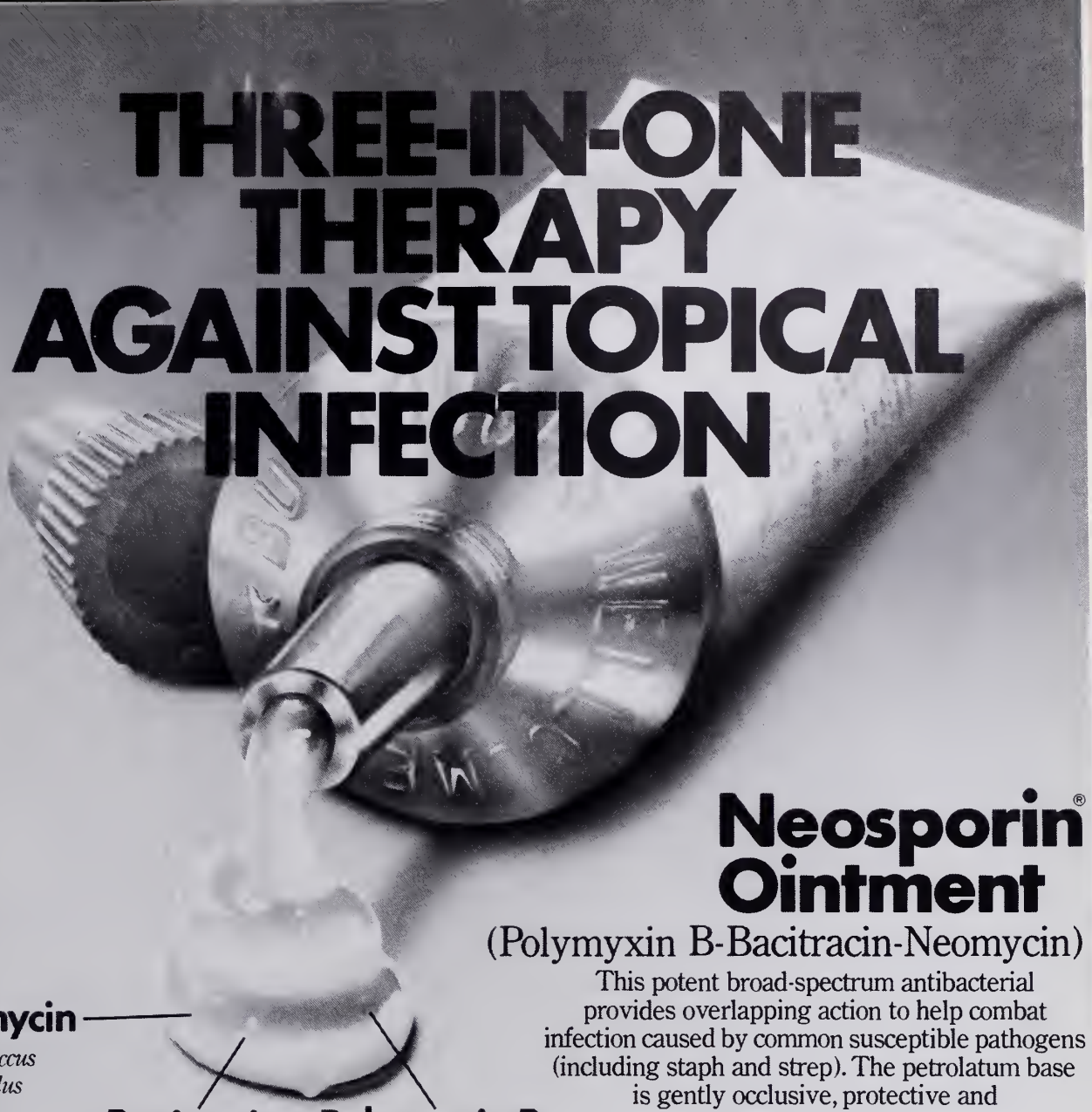
Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

THREE-IN-ONE THERAPY AGAINST TOPICAL INFECTION



Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

This potent broad-spectrum antibacterial provides overlapping action to help combat infection caused by common susceptible pathogens (including staph and strep). The petrolatum base is gently occlusive, protective and enhances spreading.

Neomycin
Staphylococcus
Haemophilus
Klebsiella
Aerobacter
Escherichia
Proteus
Corynebacterium
Streptococcus
Pneumococcus

Bacitracin
Staphylococcus
Corynebacterium
Streptococcus
Pneumococcus

Polymyxin B
Pseudomonas
Haemophilus
Klebsiella
Aerobacter
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In vitro overlapping antibacterial action of Neosporin® Ointment (polymyxin B-bacitracin-neomycin).

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

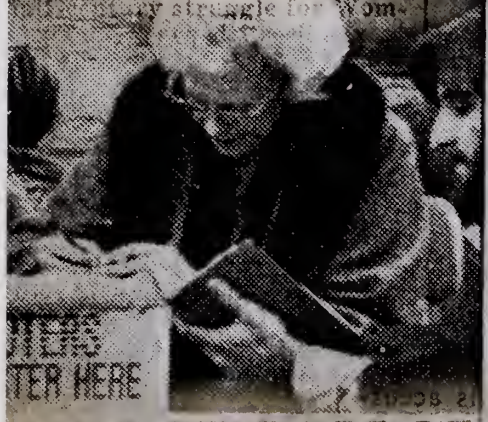
LBY PROCLAIMS VOMAN SUFFRAGE

ıs Certificate of Ratification at His Home Without Women Witnesses.

ITANTS VEXED AT PRIVACY.

nted Movies of Ceremony, But Both Factions Are

SHINGTON, Aug. 26, 1920—



ITERS
TER HERE

Social Security Bill Is Signed; Gives Pensions to Aged, Jobless

Roosevelt Approves Message Intended to Benefit 30,000,00(Persons When States Adopt Cooperating Laws–He Calls the Measure 'Cornerstone' of His Economic Program.

WASHINGTON, Aug. 14, 1935 The Social Security Bill, providir a broad program of unemployme insurance and old age pension and counted upon to benefit son 20,000,000 persons, became law t day when it was signed by Pres dent Roosevelt in the presence those chiefly responsible for pu ting it through Congre s.

Mr. Roosevelt call d the meas "the cor erstone in a structu which is eing [illegible] me s c mpl [illegible]

COMPLI

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today, 94 to 0, and sent [illegible]

OL
IGNE
the Draft Ends Nov

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the Secretary of the Army that



TRUMAN CLOSES ED NATIONS CONFEREN TH PLEA TO TRANSLATE HARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can be in history!"

Just before the plenary session the President accompanied the

PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST., N. W. WASHINGTON, D. C. 20005

are usually referrable to the anemia, i.e., weakness, dizziness, dyspnea, edema, pallor and heart failure. Miscellaneous symptoms consist of fever, gastrointestinal complaints, and weight loss.

Presenting signs are secondary to anemia, to hemolysis, or to disturbance or the reticuloendothelial system. Hence, splenomegaly, hepatomegaly, lymphadenopathy, jaundice, thyromegaly, edema, pallor, and signs of heart failure are relatively common.

Treatment Of AIHA

Warm AIHA. Corticosteroids are the mainstay in the treatment of AIHA[26,27]. They are thought to decrease both lymphocyte and antibody production, to interfere with the antigen-antibody reaction, and to decrease splenic sequestration and the destruction of IgG coated red cells. Only one of these theories has been proven conclusively. It has been shown that hemolysis may decrease before the antibody concentration falls and that remission may occur in AIHA despite the persistence of high antibody levels. But, in the guinea pig model, glucocorticosteroids proved to be highly effective in decreasing phagocytosis of IgG coated red cells by splenic macrophages. Steroid therapy was less effective when both IgG antibodies and complement were acting synergestically to bring about red cell destruction. However, in this situation, very large doses of steroids result in a significant reduction in hemolysis.

Splenectomy. The spleen is the most efficient filter of IgG coated erythrocytes and its removal decreases phagocytosis by eliminating the bulk of tissue macrophages with IgG receptors. Sometimes splenectomy is unsuccessful in patients with AIHA who have enormous concentrations of IgG antibodies on their erythrocytes and in their plasma. In this instance, other tissue macrophages become involved in sequestration and phagocytosis[19].

As would be expected, splenectomy is usually unsucessful when IgM antibodies and complement are responsible for erythrocyte destruction, for sequestration in the cold agglutinin syndrome is primarily intrahepatic.

Antimetabolites: Cylosphosphasmide, Azthioprine, and other antimetabolites occasionally lead to clinical improvement in patients with warm AIHA. Their mode of operation is not clear. Antimetabolites are thought to improve erythrocyte survival by interfering with antibody production rather than by altering macrophage function.

Cold Antibody Disease

Patient 2. *This 24-year-old white male developed a sore throat, fever, myalgia, and arthralgia over a three-day period. His symptoms persisted and he sought medical advice. (Fig. 9)*

On physical examination, he was well developed, nourished, and febrile. He had a sinus tachycardia, rate 110/min. Pertinent physical findings included: exudative pharyngitis, cervical and axillary lymphadenopathy, slight hepatomegaly, and a moderate splenomegaly.

A monospot test was positive for infectious mononucleosis.

Within the next two days, the patient became quite ill and required hospitalization. Figure 9 shows his hematologic course while under observation. In addition to developing a striking fall in his hematocrit, he had a leukemoid reaction and thrombocytopenia; his cold agglutinis and Anti-I and Anti-C_3 Coombs test became positive. Steroids were not administered and only supportive treatment was given over the next few weeks (Fig. 9).

It was assumed the hemolytic anemia would run its course and subside. It did.

IgM Antibodies And Cold Agglutinin Syndromes

Usually the IgM antibodies are responsible for cold agglutination syndromes[2]. These antibodies are:

1. high molecular weight and antibodies, greater than one million; (Fig. 10);
2. capable of bridging the Zeta potential and causing attlutination;
3. fix complement and cause lysis with complement activation;
4. react optimally at temperature below 37° C;
5. cause hemolysis in vivo by activating the complement system;
6. detected by the presence of a specific Coombs test for C_3 and C_4.

Kupffer cells in the liver have specific receptors for C_{3b}, hence, red cells injured by IgM agglutinins are preferentially destroyed in the liver.

Cold Agglutinin Disease

Cold antibodies give rise to two clinical entities. The "cold agglutinin syndrome" is more common and it accounts for about two-thirds of all patients with this type of hemolytic anemia. Paroxysmal cold hemoglobinuria (PCH) is the second entity associated with cold hemolysis.

Cold agglutinins usually do not react with red cells if the temperature is above 32° C. As the temperature is lowered towards 0° C, the antiglobulin titer quickly rises and complement fixation occurs. Hemolysis occurs at higher temperatures, usually around 10 to 30 degrees centigrade, where the two activities, i.e., complement binding and hemolysis, overlap. Maximum lysis occurs at about 22° C.

IgM Antibodies And Red Blood Cell Destruction

When ^{51}Cr-labelled red cells sensitized with specific IgM antibodies are given to normal guinea

pigs or to human volunteers, the labelled red cells disappear from the circulation within *minutes* as a result of hepatic sequestration and intravascular lysis. However, IgM coated cells are not always destroyed by the hepatic macrophages[2]. Temporary sequestration may occur. If red cells bearing activated C_{3b} are not immediately sequestered and fixed by hepatic and splenic macrophages, surface C_{3b} may be cleaved and inactivated by C_{3b} inactivator[28]. Such cells are then freed from the Kupffer cells and live normally in the circulation bearing the immunological marker C_{3d}. This explains why patients with mild titers of IgM (cold) agglutinins have little anemia. However, with cold stress and in the presence of high titers of cold agglutinins, the level of C_{3b} inactivator may become inadequate. Then, red cells with surface C_{3b} are fixed to receptors, phagocytized, and destroyed.

Studies in the guinea pig model and in complement deficient human volunteers clearly indicate that complement fixation is absolutely essential to red cell hemolysis by IgM antibodies. Without complement activation, there is no erythrocyte destruction.

Etiology

The IgM cold agglutinin syndrome has been divided into a monoclonal and a polyclonal type.

Monoclonal cold agglutinins are responsible for IgM induced hemolysis in patients with lymphoreticular disease, such as Hodgkin's disease, lymphoma, chronic lymphocytic leukemia, chronic myelogenous leukemia, multiple myeloma, immunodeficiency disease, and Waldenstrom's macroglobulinemia. Cold agglutinin titers in some of these entities may be enormously high.

Diseases associated with polyclonal agglutinins are usually infectious in nature and include mycoplasma pneumonia, infectious mononucleosis, cytomegalic inclusion body disease, Listeriosis, and collagen vascular disease.

The IgM antibodies associated with infections and also the lymphoproliferative disorders are usually specific for the I antigen of the red cells. I antigenicity is assigned to cold agglutinins that react predominantly with adult red cells in vitro and i antigenicity is assigned to agglutinins that react mainly with fetal erythrocytes.

Clinical Manifestations

Ordinarily, cold agglutinin disease occurs in the elderly but the young, too, may be afflicted. Acrocynosis involving the tops of the fingers, nose or ears may be the first sign of illness. Surface capillary changes occur as the skin is exposed to ambient temperatures below 28° C. Intracapillary red cell agglutination occurs leading to skin pallor

RED CELL and COMPLEMENT LYSIS

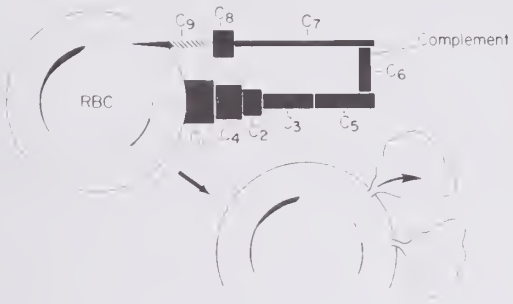


Figure 8—This schematic drawing depicts the complement sequence as a drill boring into a red cell, with loss of hemoglobin through the punctured membrane.

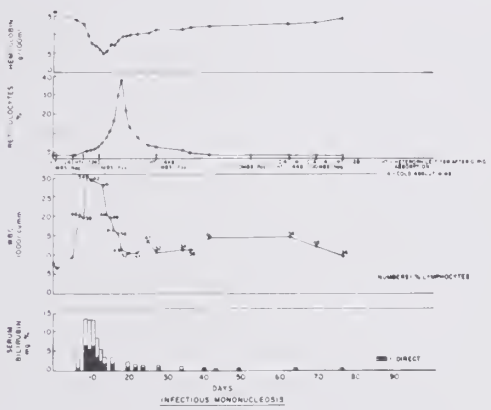


Figure 9—Patient No. 2—Note the striking fall in the hematocrit, the leukemoid reaction, prominent reticulocytosis, and variation in the Coombs test. The high serum bilirubin was secondary to involvement of the liver. Like the serum bilirubin, the SGOT and LDH levels returned to normal with clinical improvement. Cold agglutinin titers never rose to high levels.

IgM Molecule

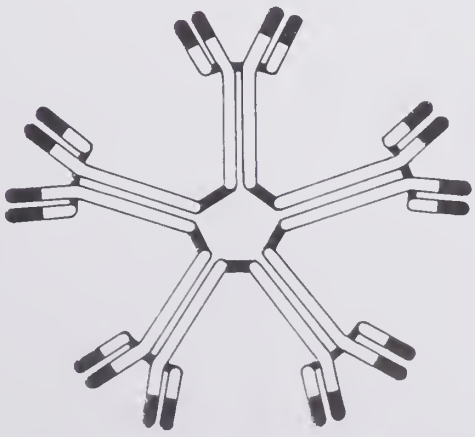


FIGURE 10.

and at times, to marked cyanosis and even Raynaud's phenomenon.

Since cold is the inciting factor, the most important clinical consideration is the temperature at which cold agglutinin antibodies are activated. If the cold antibody titer is high at 4° C but the antibodies are relatively inactive at 28° C, there is relatively little hemolytic anemia. In contrast, if the cold agglutinin titer is relatively low at 4° C but the antibodies are active at body temperature, hemolysis may be significant. As yet, we do not know why cold reacting antibodies have such a striking thermal dependence on cold.

Treatment Of Cold Agglutinin Disease

While glucocorticosteroids are highly effective in the treatment of warm AIHA, they are not as beneficial in the treatment of cold agglutinin induced anemia. They were not used for treatment of Patient 2. His anemia was thought to be the result of infectious mononucleosis with cold antibody direct against the I antigen. It was presumed that supportive treatment of his hemolysis and thrombocytopenia would suffice and that both would clear with clinical improvement. Even though corticosteroid therapy was not used in our patient, sometimes steroids are beneficial for patients whose cold agglutinin anemia is secondary to chronic lymphohepatic leukemia or lymphoma. In these patients, a trial of corticosteroid therapy is indicated.

Splenectomy is seldom beneficial for cold agglutinin disease because the primary site of erythrocyte destruction is hepatic.

Plasmaphoresis by removing large quantities of IgM is sometimes effective for cold hemolysis, secondary to infection and malignancy. Centrifugation is carried out at 37° C in order to avoid attachment of the IgM antibodies to red cells. Should this occur, complement may be fixed and lead to an intravascular hemolysis when the red cells are infused.

Treatment of mycoplasma infection with broad spectrum antibodies, occasionally helps to decrease cold agglutinin titers and to shorten the course of infection.

The avoidance of cold is the best prophylactic measure available.

Paroxysmal Cold Hemoglobinuria (PCH) IgM Cold Reactive Antibodies.

This entity was originally detected by the passage of a dark urine, containing hemoglobin, by patients exposed to cold. In 1904, Donath and Landsteiner suggested an autolysin combined with the patient's erythrocytes at low temperatures and that labile serum factors were responsible for red cell lysis when the temperature was increased[1]. The Donath-Landsteiner antibody is now known as a 7S-IgG antibody with anti-P specificity. It is remarkably hemolytic even at relatively low concentrations. This is the only cold hemolytic entity associated with IgG antibody.

In the classic Donath/Landsteiner test red cells exposed to the hemolysins at O° C undergo hemolysis when the temperature is raised to 37° C. The cold antibodies bind to red cells at low temperatures, i.e., below 15° C. Complement appears to facilitate activity in the cold. Since the antibody is an IgG antibody, it will give a positive reaction with Coombs sera but the test may only be positive at low temperatures.

Clinically, the most striking findings in patients with PCH is the passage of dark brown or black urine after exposure to cold[4]. In some patients, prolonged exposure is required before systemic symptoms appear whereas in others only a few minutes of cold exposure is necessary to initiate clinical symptoms. Usually, these consist of pain in the legs, back, and abdomen, general malaise, headache, vomiting, and diarrhea, along with shaking chills and fever.

Treatment

PCH secondary to syphilis responds to penicillin therapy. When PCH occurs as a result of viral infection, it is self-limited, the anemia regressing as the patient's viral illness clears. Again, avoidance of cold is helpful in avoiding attacks.

Drug-Induced Hemolytic Anemia

There are three types:

1. the complement-fixing type (immune-complex, innocent bystander);
2. the Hapten type (penicillin); and
3. the alpha methyldopa type.

1. *Innocent Bystander.* The red cell per se does not act primarily in this reaction. Two separate reactions occur with this type of drug-induced anemia. The drug elicits an IgG or IgM reaction, usually IgM. Complement fixation occurs when the drug-antibody complex is absorbed to the red cell membrane. Here it may activate complement yielding intravascular hemolysis[4]. In such patients, the Coombs test is positive to the drug antibody complex. Usually the Coombs test is positive with Anti-C_3 or Anti-C_4 specific Coombs sera. It may be negative if only IgG Coombs sera is used. See table.

2. *Hapten (Penicillin) and (Cephalethin) Type Hemolytic Anemia.* Here the reaction differs in that penicillin binds through covalent bonds to the red cell membrane. Such binding is usually irreversible[2,9]. This reaction occurs only when large doses of intravenous penicillin, 20 million units/day, are

Mixture	Coombs Test	Lysis
Patients RBC	+	-
Normal RBC + Pt. sera	-	-
Normal RBC + Pt. sera + drug	+	+/-
Normal RBC + Pt. sera (heated)*	-	-
Normal RBC + Pt. sera (heated) + complement	+	+/-

*complement inactivated by heat

given. Intravenous penicillin per se does not lead to formation of high titer of benzylpencillyol antibodies. These antibodies develop in response to intramuscular injections of penicillin given in the past. They are the result of penicillin sensitization. When patients with such sensitization are given large doses of intravenous penicillin, the resultant reaction with penicillin (IgG antibodies) may lead to hemolysis[28]. Although IgM may be present, it does not cause hemolysis and is not complement-binding in this type drug anemia. Therefore, the Coombs test will be positive with Anti-G globulin. About 3 percent of patients receiving large doses of penicillin develop a positive Coombs test; an even smaller percentage develop hemolytic anemia.

3. *Alpha Methyldopa Type.* Here the antibodies are specific for Rh antigens and they are similar in many respects to the antibodies found in the idiopathic autoimmune hemolytic anemia. Antibodies are formed only after long exposure to the drug, usually 2 to 4 months[30].

A positive Coombs response is obtained with anti-gamma globulin sera.

The development of antibodies is also dose-dependent. Since the reaction of methyldopa is not specific, other antibodies may form, including ANA, rehumatoid factor, and antibodies to gastric mucosa. These antibodies appear to cross-react with normal tissue components. Therefore, they readily sensitize normal red blood cells in the presence of the drug. With cessation of drug therapy, antibody titers drop to negative levels within several weeks to months. Drugs having a similar hemolysis reaction include L-dopa and meferamic acid.

A positive Coombs test is found in about 30 percent of recipients of methyldopa. The incidence is highest in Caucasians, midline in orientals, and almost absent in blacks.

Treatment

Cessation of drug therapy and supportive measures are usually sufficient to relieve the drug associated type of AIHA. □

REFERENCES

1. Donath J, Landsteiner K: Uber paroxysmale Hamoglobinure. Munch Med Wochenschr 51:1590-1593, 1904.
2. Banti G: Splenomegalie hemolytique en hemopoietique: le role de la rate dans l'hemolyse. Semaine Med 23: 313-323, 1913.
3. Coombs, RRA, Mourant AE, Race RR: A new test for the detection of weak and "incomplete" Rh agglutinins. Br J Exp Pathol 26:255-266, 1945.
4. Abramson N and Lee DP: Immune hemolytic anemia. DM 20:33-37, April 1974.
5. Pollack W: Some physieochemical aspects of hemagglutination. Ann N. Y. Acad Sci 127:892-900, 1965.
6. Pollack W, Hagen HJ, Peckel R, et al: A study of the forces involved in the second stage of hemagglutination. Transfusion 5:158-183, 1965.
7. Hughes-Jones NC, Polley MJ, Telford R, et al: Optimal conditions for detecting blood group antibodies by the antiglobulin test. Vox Sang 9:385-395, 1964.
8. Mollison PL, Crome P, Hughes-Jones NC et al: Rate of removal from the circulation of red cells sensitized with different amounts of antibody. Br J Haematol 11:461-470, 1965.
9. Gilliland BC: Coombs-negative immune hemolytic anemia. Semin Hematol 13:267-275, 1976.
10. Lalezari P: Serologic profile in autoimmune hemolytic disease: pathophysiologic and clinical interpretations. Semin Hematol 13:291-310, 1976.
11. Jandl JH, Jones AR, Castle WB: The destruction of red cells by antibodies in man. I. Observations on the sequestration and lysis of red cells altered by immune mechanisms. J Clin Invest 36:1428-1459, 1957.
12. LoBuglio AF, Cotran RS, Jandl JH: Red cells coated with immunoglobulin G: binding and sphering by mononuclear cells in man. Science 158:1582-1585, 1967.
13. Mollison PL: The effect of isoantibodies on red-cell survival. Ann N.Y. Acad Sci 169:199-216, 1970.
14. Gilliland BC, Baxter E, Evans RS: Red-cell antibodies in acquired hemolytic anemia with negative antiglobulin serum tests. N Eng J Med 285:252-256, 1971.
15. Bianco C, Griffin FM, Jr., Silverstein SC: Studies of the macrophage complement receptor: alteration of receptor function upon macrophage actication. J. Exp Med 141:1278-1290, 1975.
16. Huber H, Polley MJ, Lenscott WD et al: Human monocytes: distinct receptor sites for the third component of complement and for immunoglobulin G. Science 162:1281-1283, 1968.
17. Logue G and Rosse W: Immunologic mechanisms in autoimmune hemolytic disease. Semin Hematol 13:277-289, 1976.
18. Engelfriet CP, Borne A, Beckers D, et al: Autoimmune haemolytic anemia: serological and immunochemical characteristics of the autoantibodies: mechanisms of cell destruction. Semin Hematol 7:328-347, 1974.
19. Schreiber AD, Frank MM: Role of antibody and complement in the immune clearance and destruction of erythrocytes. I. In vivo effects of IgG and IgM complement-fixing sites. J Clin Invest 51:575-582, 1972.
20. Frank MM, Schreiber AD, Atkinson JP et al: Pathophysiology of immune hemolytic anemia. Ann Intern Med 87:210-222, 1977.
21. Borsos T, Rapp HJ: Complement fixation on cell surfaces by 19S and 7S antibodies. Science 150:505-506, 1965.
22. Rosse WF: Fixation of the first component of complement (C_{1a}) by human antibodies. J Clin Invest 47:2430-2445, 1968.
23. Ruddy S, Gigli I, Austin KF: The complement system of man. N. Engl J Med 287:489-495, 1972.
24. Humphrey JH, Dourmashkin RR: The lesions in cell membranes caused by complement. Adv Immunol 11:75-115, 1969.
25. Pirofsky B: Clinical aspects of autoimmune hemolytic anemia. Semin Hematol 13:251-265, 1976.
26. Murphy S, LoBuglio AF: Drug therapy of autoimmune hemolytic anemia. Semin Hematol 3:232-334, 1976.
27. Bardana EJ, Jr., Bayrakci C, Pirofsky R, et al: The use of heparin in autoimmune hemolytic disease. Blood 35:377-385, 1970.
28. Brown DL, Nelson DA: Surface microfragmentation of red cells as a mechanism for complement-mediated immune spherocytosis. Br J Haematol 24:301-305, 1973.
29. Ley AB, Harris JP, Brinkley M, et al: Circulating antibody directed against penicillin. Science 127:1118-1119, 1958.
30. Cartairs KC, Breckenridge A, Dollery CT, et al: Incidence of a positive direct Coombs test in patients on alpha methyldopa. Lancet 2:133-135, 1966.

Infant Botulism

By Frances B. Kennamer*
and Frederick Wolf, M.D.**

Botulism is "primarily food poisoning that results from ingestion of preformed Clostridium botulinum toxin."[1] Usually the source of the toxin can be traced to improperly canned or preserved foods such as home-canned products or commercial, canned fish.

Five type-specific, immunologically differentiable exotoxins are produced by the Clostridium botulinum bacillus—A,B,C,D,E.[2] Types A,B, and E are most common in man. "Toxins A and B are highly poisonous proteins which are resistant to digestion by the enzymes of the gastrointestinal tract.

"Following absorption, they give rise to neurologic symptoms by interfering with the release of acetylcholine from the terminal endings of cholinergic nerve fibers."[3]

Until 1976 every case of botulism had been found in adults. Infants are generally fed a special diet, thereby reducing the risk of infection from foods ingested by other members of the family.

In 1976, however, botulism was diagnosed in 4 California infants, all 3 months of age or younger and all previously healthy. Infant botulism became recognized as a new toxigenic infectious disease.[4] Clinical symptoms included constipation, irritability, weakness followed by loss of limb strength, with neurological impairment: ptosis, sluggish pupillary light reaction, facial weakness and poor anal sphincter tone.[5]

Also noted were ophthalmoplegia and dysphagia.[6] Diagnosis at time of hospital admission included congenital myasthenia gravis, poliomyelitis, blubar encephalitis, brain tumor, and other metabolic disorders.[7]

Botulism was finally diagnosed by the presence of botulism toxin and C. botulinum in fecal samples. Approximately one-half of these infants (and one-half of other subsequently diagnosed as having botulism) suffered from respiratory arrest and required mechanical ventilation often in an intensive care facility.

Eleven More Hospitalized

From September 1976, when the initial cases were identified, until February 1977, eleven more infants were hospitalized with infant botulism: 8 in California, 1 each in Pennsylvania, Tennessee, and Texas.[8] Of these 15 total cases, 11 were male and 4 were females; type A toxin was isolated from 9 and type B from 6.

Although extensive investigation was conducted to pinpoint the causative agent, no common source was found. The chart in Appendix I shows results of the investigation into 6 of the 15 cases.[9]

The January 20, 1978 issue of *Morbidity and Mortality Weekly Report,* published by the Center for Disease Control, contains the most recent findings about infant botulism. Currently a total of 58 cases have been identified: 37 in California, 4 in Pennsylvania, 4 in Utah, 2 in Washington, and 1 each in Arizona, Colorado, Montana, New Jersey, Nevada, New York, North Dakota, Oregon, Tennessee, Texas, and Wisconsin.[10] (More cases have been identified in California, according to the article in *MMWR,* because the studies of infant botulism have been conducted in that area and have resulted in increased awareness of its existence.)

Median age of the 58 infants was 10 weeks. Botulinal toxin and C. Botulinum spores were identified in 52 cases. Type A was found in 33 of the 58 cases and Type B in 25. Seven of the 8 cases east of the Mississippi River were identified as type B, reflecting the known geographic distribution of A and B spores in the American soil.[11] No more conclusive evidence has been found concerning the soil and its relation to incidence of the disease.[12]

Although no common food source was found after investigation of all 58 cases, a potential source of C. bot-

Results of Field Investigations of Infant Botulism — Appendix I

Factor Investigated ↓ / Case Number →	1	2	3	4	5	6
Type of Botulism	A	A	B	B	B	A
Milk Source	Breast Only	Formula with Iron	Breast and Formula	Breast and Formula	Breast only	Breast and formula with iron
Water Source	Municipal	Bottled and Municipal	Municipal	Private Well	Municipal	Municipal
Foods Consumed Prior Illness:						
Cereals	....	Rice	Rice, high-protein	Rice and Oatmeal	....	Rice
Fruits	Fresh bananas and fig	....	....	Commercial banana puree; homemade apple sauce	Fresh bananas	....
Fruit Juices	....	....	....	....	Grape and Orange	....
Honey	....	....	....	....	Fresh carrots and potatoes	....
Vegetables	Yes	No	Yes	No	Yes: Contained C. botulinum organisms but no toxin.	No
Other	....	....	....	Sugar	Cookies	....
Drugs Consumed	Vitamins, acetaminophen	....	Vitamins, Fluoride	Vitamins, Fluoride	Vitamins, Fluoride	Vitamins, Fluoride, Iron
Breast Care Cream	Yes	No	No	Yes	Yes	Yes
Home-canned foods in house	No	No	No	Yes	Yes	No
Botulism in other family members	No	No	No	No	No	No

ulinum has been identified for 6 cases.[13] Pertinent examples follow:

1. In the household of one infant found to have type A toxin, C. botulinum was isolated from vacuum cleaner dust.

2. In 3 cases where type B toxins were found, the infants had all been fed a mixture of honey and water. In one of these cases, the jar of honey had been previously opened on a camping trip so that C. botulinum could have been introduced at that time.[14]

One Case In Alabama

A project was initiated in California, following these findings, to study the correlation between soil types and known cases of infant botulism. According to Stephen Arnon, M.D., Infectious Disease Section, State of California Department of Public Health, Berkeley, the study was discontinued late in 1977.[15] Nonetheless, some significant facts were gathered from these studies. Toxins of the same type as the toxin isolated from the fecal samples of infected infants were found in the soils of areas where the child could have become infected.[16]

(In Alabama, only one case of botulism has been reported in the last four years. This was in an adult in Lawrence County and the source of infection was home-canned products.[17] Although no information was available about whether the C. botulinum spore was found in the soil, other information leads to the assumption. For future reference, should studies continue, soil types in Lawrence County are paleudults, fragiudults, hapludults, or dystrochrepts.[18])

Soil seems to be the reservoir for C. botulinum world-wide.

Dust particles cover vegetables, fruits, seep into homes—when then are no cases of adult infection from C. botulinum spores identified? Botulism can occur in infants even though they have not ingested pre-formed botulin toxin. "(We) believe that ingested C. botulinum spores, or vegetative cells in the absence of ingested toxin, colonize and produce botulinal toxin that causes illness in susceptible infants."[19] Apparently, the spores cannot germinate in the intestines of adults, so that they become infected only if preformed botulin toxin is ingested.[20]

Further investigation should provide more information about infant botulism. Dr. Arnold comments that presently physicians are not aware of the existence of infant botulism. He postulates that an estimated 250 infants are infected with botulism annually.

With increased physician awareness, many of these cases could be identified early, making immediate access to an intensive care facility possible. This is vital with the frequent occurrence of respiratory arrest. Dr. Arnon further comments that possibly some of the mysterious infant deaths could be explained and future deaths avoided with proper understanding of infant botulism.[21] □

Bibliography

ARNON, Stephen S., M.D.; Midura, Thaddeus, F., PhD; Clay, Susan, M.D.; Wood, Ronald M., Phd; Chin, James, M.D. "Infant Botulism," The Journal of the American Medical Association, Vol. 237 (May 2, 1977), 1946-1951.

ARNON, Stephen S., M.D. Telephone Interview (January 31, 1978).

"BOTULISM in the United States, 1976." The Journal of Infectious Disease, Vol. 136, No. 6 (December, 1977), 829-832.

DORLAND'S Medical Dictionary. Twenty-second edition. W. B. Saunders Company. Philadelphia, 1977.

"FOLLOW-UP on Infant Botulism—California, Pennsylvania, Tennessee, Texas," MMWR, Vol. 26 No. 5 (February 4, 1977.)

"FOLLOW-UP on Infant Botulism—United States," Morbidity and Mortality Weekly Report (Center for Disease Control, pub.), Vol. 27, No. 3 (January 20, 1978).

GENERAL Soil Map. State of Alabama, 1974.

"INFANT Botulism," MMWR, Vol. 25, No. 34 (September 3, 1976).

LYGHT, Charles E., M.D., ed. The Merck Manual. Merck, Sharp, and Dome Research Laboratories, 1966.

PUGH, Lorene. Division of Epidemiology. Alabama Department of Public Health.

Footnotes

1. JAMA, p. 1946.
2. Dorland's Medical Dictionary, p. 674.
3. Ther Merck Manual, p. 559.
4. JAMA, p. 1946.
5. MMWR, Vol. 25, No. 34, p. 30.
6. The Merck Manual, p. 559.
7. MMWR, Vol. 26, No. 5, p. 31.
8. Ibid., p. 31.
9. JAMA, p. 31.
10. MMWR, Vol. 27, No. 3, p. 17.
11. Ibid., p. 18.
12. Arnon, Telephone Interview.
13. MMWR, Vol. 27, No. 3, p. 18.
14. Ibid., p. 18.
15. Arnon, Telephone Interview.
16. Ibid.
17. Pugh, Lorene
18. General Soil Map
19. Arnon, Telephone Interview
20. Ibid.
21. Ibid.

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Psychiatric Nursing Home Patients

by BRENDA M. CALHOON, Ph.D.*

While all of us have some knowledge of what/when/who resides in nursing homes, few are aware that recent court orders affecting mental health state facilities are making a mockery of that care.

It is admirable that federal and state officials are interested in releasing patients from state facilities; it is admirable that those released be provided other alternatives for treatment.

The puzzling aspect Fairview Medical Center Psychiatry has encountered lies in the "merry-go-round" process which many elderly persons face who are released from state mental health center facilities to nursing homes.

There seems to be a method to the madness. First the geriatric patient is released from a state mental health hospital to a nursing home. He/she, becomes, in a short time, hostile (as opposed to previous passivity), more confused, at times violent (as opposed to previous non-violent patterns) and generally disruptive to the nursing home routine. Countless times in the past year the psychiatric staff at Fairview Medical Center has obtained this history from nursing homes when admitting a patient.

Food for thought involves such questions as: (1) Was the patient ready for release from the state hospital or were we intent on filling quotas? (2) Can a patient confined in a long term state mental health facility ever find happiness in a nursing home? (3) Are we formulating castles in the sky about releasing mental health patients without realistic plans for continuing treatment? (4) Are nursing homes prepared in any way by anyone to assume the treatment of emotionally disturbed individuals? (5) Do we need a different type facility for release — psychiatric nursing homes?

This article poses no hard and fast solutions to the above questions. Our area of immediate interest is the role within the merry-go-round in which we find ourselves: State hospital, nursing home, private acute psychiatric unit, state hospitals. As a short-term

CONTINUED ON PAGE 55

An old Chinese Proverb states:

"Tell me, I'll forget. Show me, I may remember, but, involve me and I'll understand."

Often, a spouse or associate of a physician with a problem is involved; she or he may understand and each may aid in the concealment of this problem. It is difficult to recognize or admit physician impairment.

As defined by the AMA Mental Health committee, on impaired physician refers to "any physician who is so disturbed that he is in danger of injuring his patients." (This could be expanded to include injury to anyone around this physician.)

In Alabama, to what extent drug addiction, depression, unhappy marriages or other reasons have caused physicians to become impaired, is not known. But future Auxiliary leaders have become aware of this problem from studies and seminars presented by the AMA Auxiliary for the past two years at the Chicago Fall Confluence, and from Dr. John B. Rice's presentation on medical marital pressures at our fall workshop.

Mrs. Clifford Pringle, President-elect of Mobile County, five other county President-elects and state President-elect Mrs. Aubrey Terry heard psychiatrist Dr. Sylvia Chase discuss findings in physician impairment in 30-year case follow-ups of 47 medical students. (Forty-seven others were used as controls). According to their report 47% had bad marriages, 36% had to seek relief from drugs though they weren't addicts, 34% had to seek psychiatric care and 17% had to have hospitalization.

The typical picture of a physician in trouble or about to be in trouble, two to five months before it occurs is as follows: He appears to be overworked, anxious, keeps erratic office hours, and doesn't seek consultation for difficult patients.

He doesn't sleep well or eat well, starts to self-medicate and he may express or just feel that he has no one to whom he can turn. He will not take vacations because he considers himself indispensable. If he is very depressed he may even consider or commit suicide. These suicidal urges appear to peak at 40 or before.

According to Author Marv Miller, Ph.D., a consultant in gerontology, thanatology, and suicidology at Arizona State University, each year about 133 (approximately the number of some medical school's entire graduating class) die by their own hands under age 40. Twenty-eight percent of physician deaths are suicides.

These may be understated because doctors certifying death certificates may mask suicide with a euphemism. At Washington University in St. Louis, researchers found that death certificates of obvious physician suicides sometimes had other modes of death certified. (Hanging became "asphyia"; self-inflicted gunshot wound became "accidental gunshot.")

Paradoxically, according to most researchers, the very traits that make a good physician may make physicians vulnerable to psychiatric problems. At the AMA Auxiliary Fall Confluence, masochism, long-suffering, absence of fun, and obsessional drives appeared to most often occur in physicians with psychiatric problems.

Dr. Miller also listed high risk physicians as those who are competitive, compulsive, individualistic, ambitious, and apt to be graduates of high prestige schools. These traits also make it hard for a physician seeking help to develop a worthwhile relationship with a psychiatrist.

Florida's 1977 Auxiliary president, Mrs. W. H. Harrison, concerned about physician impairment, but also about the anxiety and concern members anonymously expressed about medical marriages, developed a state project to try to determine what could be done.

While no overt interest was displayed, there were many discreet inquiries and requests for Emmnauel Steindler's booklet, "The Impaired Physician," which she had obtained from the AMA. Finding that the terminology "impairment" caused a negative response, she called her project, "Characteristics of Physicians and Their Families."

Samplings were to be made of one large county and one small county for a pilot project. After corresponding with the counties selected, she received an enthusiastic reply from the large county, but a note from the small county Auxiliary president declining to participate.

The next small county vice-president selected also refused, saying that there were no impairment problems in that county. (Mrs. Harrison had selected it because she knew personally of two.)

Out of 350 questionnaires sent with instructions to answer anonymously, 169 were immediately returned and 50 more were returned after her report was prepared. She included 48 mostly multiple choice questions, about medical, marital, and family life. Toward the end she included questions dealing with impairment. An example was: "If you sought help, you would seek help from: a) a friend of yours, b) Mutual friend, c) Minister, d) Therapy group, e) Psychiatrist, f) All of these if necessary.

Ninety-five percent answered (c) minister. To the question, "If your husband will not recognize his problem, you would": 20% said they'd speak to their closest peer; 25% said, see a psychiatrist, 22% would see a minister, 17% would find their own outlet and only 7% would consider divorce.

Ninety-five percent of wives answering felt neglected, 53% thought medical marriage was demanding on the wife, 57% feeling home life was difficult for children. Sixty-five percent revealed some family member had received professional counseling. Contradictions appeared because in spite of feeling neglected, 8% answered their marriages were comfortable and happy.

When asked how they felt home life of the physician ranker with other physicians, their answers closely paralleled that of a 1959 study done by Dr. Charles Collins and published in the American *Journal* of Obstetrics and Gynecology. He observed that "...no other group of wives had to adjust themselves to a profession or business which is so paramount in their husbands' lives as that of the medical profession. There is little doubt that these women marry our profession with us and the two merge so closely that often in their eyes they are inseparable."

When asked why they liked being married to a physician, many wives wrote "because I love him" rather than giving reasons such as, "because it is prestigious" or "a nice home and a freedom from monetary problems."

As a result of inquiries and com-



Mrs. John Taylor
President

ments stimulated by the Florida questionnaire, Mrs. Harrison came to the following conclusions:

- The number of recognized impaired physicians is not large enough to demand individual attention. (Presently there are 17 in my state on probation and 10 under investigation.)
- Many cases go undetected. (In my county with a physician population of approximately 200, there have been five suicides and two legitimate attempts within the 15 years we have resided here.)
- Wives are not educated to look for impairment in the husbands.
- The questionnaire would seem to point out one or both of these:

(a) Physicians tend to marry certain types of women.

(b) Wives of physicians do not know what is normal to expect from their marriages.

- Wives want to protect their husbands' images—private and public.

Remember, over 90% of all physicians are well adjusted and are loved by their wives and husbands. □

Patients

CONTINUED FROM PAGE 53

acute unit we play one small part in the farce but it appears to be an increasing one.

While nursing homes may be appropriate for some elderly patients, we wonder if they should be held accountable for the care of the elderly more psychiatrically disturbed patient?

Perhaps our thoughts should become attuned to a more appropriate designated facility such as psychiatric homes for the elderly or designing a program within nursing homes to deal with the special problems of this patient population. □

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PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board eligible 1978; National Board; Available July 1, 1978. LW-004.

GASTROENTEROLOGY/INTERNAL Medicine: Age 29; Medical College of Georgia, 1973; National Board certified, American Board certified and passed Flex Examination; seeking partnership, multi-specialty group, single specialty group, Institutionally based or research. Available July 1978. LW-06624.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; Presently in the army completing a two year obligation, (wife is also a Board eligible Internist and is presently completing an infectious disease fellowship.) Wish to join a small group in general internal medicine preferably a small city with rural surroundings. Available August 1978. LW-018. (See LW-019.)

INTERNAL MEDICINE/RHEUMATOLOGY; Age 31; Ohio State University, 1972; American Board certified; American Board eligible; seeking single specialty group, institutional based or multi-specialty group. Available July 1978. LW-09159.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 30; University of Louisville 1973; seeking clinical practice. Available July 1978. LW-007.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; seeking practice in general internal medicine with a small group, preferably a small city rural surroundings. Available July 1978. LW-019. (See LW-018.)

SOPHOMORE medical student—age 22, interested in a town or hospital assisting with medical school costs in return for service there in general/family practice. Available 1980. LW-01.

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; University of Virginia, 1973; National Board Certified; American Board Certified; will be American Board Eligible 1978; seeking single specialty group or partnership. Available July 1978. LW-08695.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; LSU School of Medicine, 1971; American Board Certified; will be American Board Eligible 1978; seeking single specialty group, multi-specialty or partnership. Available July 1978. LW-10561.

GENERAL PRACTICE EMERGENCY ROOM: Age 26; Creighton University, 1976; seeking practice in the Birmingham area or within a 20-mile radius. Available July 1978. LW-100.

OPHTHALMOLOGY: Age 33; University of Alabama, 1971; American Board Certified; seeking private, partnership or group, industrial or institutional preferably in the Mobile area with a population of 25,000 or more. Available July 1978. LW-200.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PEDIATRICS: Age 27; University of Texas Southwestern, 1975; National Board Certified; seeking partnership, single specialty group or solo. Available July 1978. LW-10873.

RHEUMATOLOGY/INTERNAL MEDICINE: Age 30; Baylor College of Medicine, 1973; American Board Certified; Will be American Board Eligible 1978; seeking multi-specialty group, single specialty group or solo. Available August 1978. LW-10557.

SURGERY/EMERGENCY MEDICINE: Age 46; University of Tennessee, 1955; American Board Certified; seeking partnership, solo or multi-specialty group. Available June 1978. LW-10649.

PHYSICIANS WANTED (Opportunities for Practice)

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and larger cities contains a progressive 74 bed hospital. Ample opportunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17.

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital provileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

GENERAL PRACTITIONER'S 2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-5.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 4500 population. Within 17 miles north of Montgomery, Alabama. The finest recreational areas in Alabama consisting of 2 large lakes. Newly expanded 69 bed hospital with 8 active staff members. Invitation to visit with expenses paid will be directed to those qualified. PW-9.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER Wanted—Town of 6,000 population trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities include golf course, country clubs, tennis courts. PW-7.

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PRACTICE OPPORTUNITIES for family practitioners, general surgeon, OB-GYN, orthopedic surgeon in progressive community of 10,000 with service area of 40,000, in Northwest Alabama with good schools, housing and recreation. Attractive relocation and income guarantees. PW-25.

Those Other Categories:

An Arithmetic Lesson

II III IV V

By George D. Oetting, Ed.D., Director of Education

WHAT'S the first impression that comes into your mind when someone says, "CME?" Do you envision a large gathering of physicians seated quietly in neat rows of chairs, taking notes and carefully listening as an august professor from a nearby medical school presents a formal lecture — liberally illustrated with colored 35mm slides? Is this close to your impression? From talking to many physicians, I get the feeling that it is. CME means Category I "live" programs—right? Certainly this kind of education is an important part of your personal CME program; AMA requirements for the Physician's Recognition Award (PRA) stipulate that 60 of the 150 hours of CME over a three year period must be Category I (40%). But how about the other 60%?

The rest of this article is a commerical for "those other categories" (II, III, IV & V) which can be very effectively used in meeting 60% of your CME requirements. Attaining CME credit in these categories is both easy and difficult.

First, let's talk about the easy part. Many of you are involved in Category II-V CME activities and may not even realize it! To illustrate this, let us go quickly through these categories and do a little arithmetic along the way: *Category II:* CME activities of hospitals, medical societies, etc., which are not formally accredited for Category I CME (maximum allowable — 45 hours).

Do you attend a hospital staff meeting once a month where some sort of scientific program is presented? If you do, take credit for 36 hours in Category II for the three year period.

Do you occasionally have scientific programs at your county medical society meetings or at your annual state specialty society gatherings? If you only attend three of these per year, take 9 hours credit for Category II.

See how relatively painless this is? You probably have been doing these kind of activities for years, but may not have related them to your CME requirements. Add these examples together for a total of 45 hours — almost one-third of your total CME requirements!

Category III: Medical Teaching (Maximum of 45 hours). You might think that this category only relates to medical school professors or learned visiting lecturers. Not so. Do you ever teach medical students or residents at your hospital? Have you ever presented a program for fellow physicians? How about those training sessions you put on for nurses, medics, etc.? All these count for Category III. I'll bet most of you do at least *5-10 hours* over a three year period.

Category IV: Papers, publications, books and exhibits *(45 hours maximum).* Let's skip this one since this kind of activity, though very beneficial, may not be as applicable to the majority of physicians.

Category V: Non-Supervised Individual CME Activities *(maximum of 45 hours).*

Do you spend at least one hour per month reading scientific journals, books, etc.? If so, take credit for up to *22 hours* of Category V CME.

Do you spend time in meetings, or programs concerned with the review and evaluation of patient care — such as peer review, medical and chart audits, case conferences, PSRO meetings, tissue review, infections or death conferences? Take a maximum credit of *22 more hours* of Category V CME for these activities.

Other hours for taking self-assessment exams and time spent learning from a consultant can also be credited here for Category V.

Well, that's it — just crediting some of the activities which I feel would be usual for most physicians, will easily give you over a total of 90 hours — the other 60% needed to meet your CME requirements.

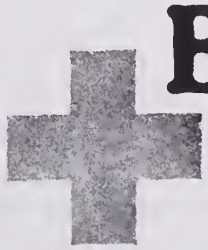
On The Other Hand

Now let's consider the difficult part. Keeping track of activities in these "other categories" can be difficult because you will have to do this yourself. No one will be issuing a CME attendance certificate or computer printout for most of the Category II-V educational activities.

You will therefore need to develop some sort of personal system to record your participating in these activities. I would suggest that you start keeping a CME file to note these activities *as they occur* — do it as soon as possible, so you don't forget. Perhaps your secretary or office manager could provide assistance to you in this area.

These "other categories" are in a way, a statement by AMA and others, that physicians can learn and improve their medical skills in many different ways, outside the formal classroom setting. The intense reading of a pertinent journal article or interaction with colleagues can be just as educationally beneficial; in fact, it may produce the best kind of learning. Therefore, we have categories II-V — no less important than Category I in your personal CME program.

End of commercial. ☐



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WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

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PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to $40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 487, Carrollton, Alabama 35447, or call Frank Cochran COLLECT 367-8138, evening hours 553-2198.

ATTENTION PHYSICIANS—The United States Air Force Medical Service has the following openings in Internal Medicine: Tyndall AFB, Florida; Robins AFB, Georgia; Eglin AFB, Florida (Cardio); Shar AFB, South Carolina; Andrews AFB, Maryland; In Radiology: Columbus AFB, Mississippi; Andrews AFB, Maryland; Maxwell AFB, Alabama; and In Orthopedic Surgery: Tyndall AFB, Florida. Other world wide assignments are available for all specialities. For qualified applicants the United States Air Force Medical Service offers a salary range from $33.000 to $45,000. Additional benefits include a thirty (30) day paid vacation annually, an excellent retirement program, plus numerous base privileges. Contact Capt. Bruce A. Geis, 3050 Presidential Drive, Suite 208, Atlanta, Georgia 30340, (404) 451-3888.

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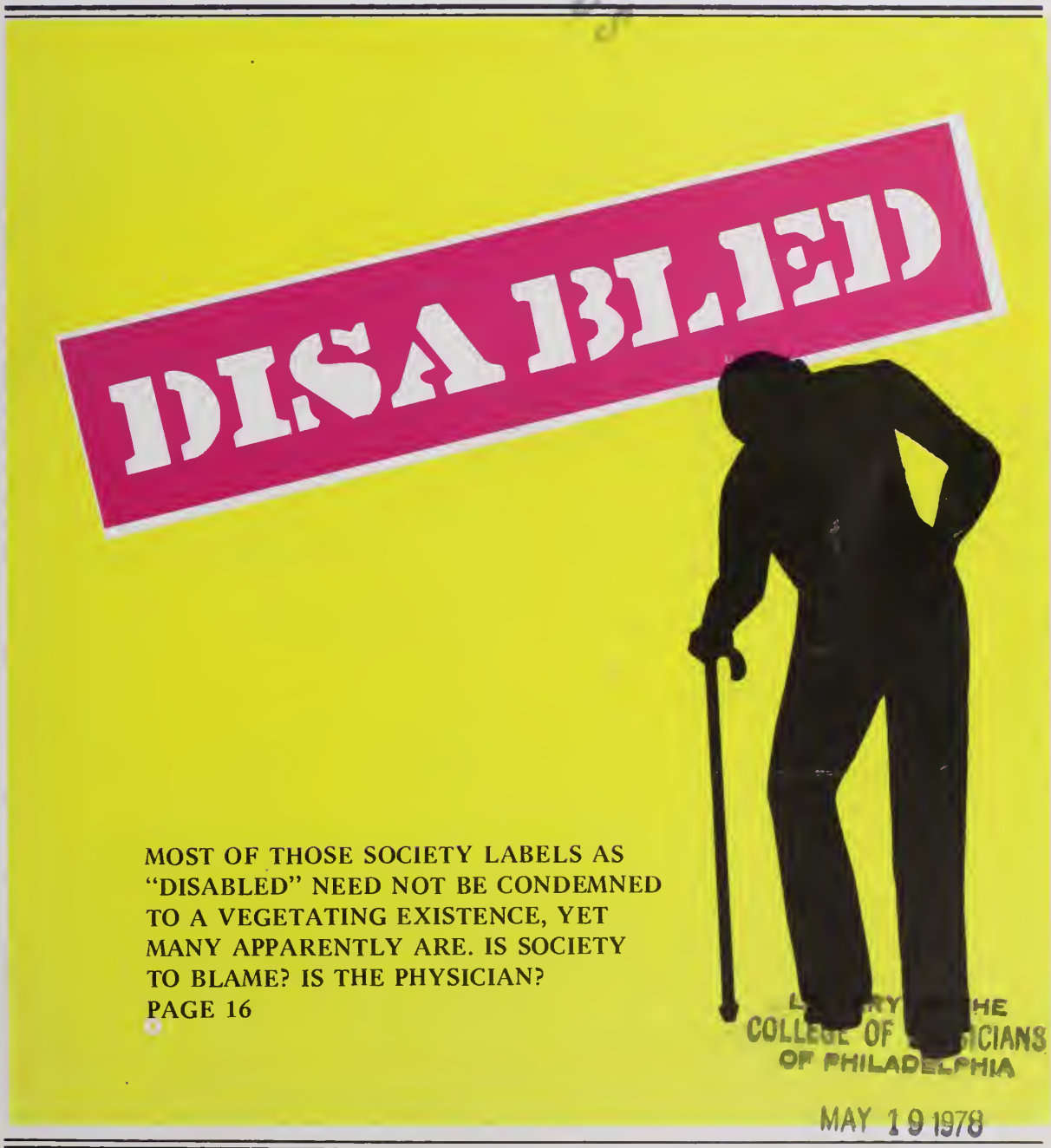
MARCH 1978

JOURNAL

of the Medical Association of the State of Alabama

vol. 47 #9

MD



MOST OF THOSE SOCIETY LABELS AS "DISABLED" NEED NOT BE CONDEMNED TO A VEGETATING EXISTENCE, YET MANY APPARENTLY ARE. IS SOCIETY TO BLAME? IS THE PHYSICIAN?
PAGE 16

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual,* published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost ($6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost ($1.65) from MASA.

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FROM THE EXECUTIVE DIRECTOR

If there ever was a time when Alabama physicians needed to gather in convention assembled, 1978 is the year.

For one thing, it is the target year for the Carter Administration to introduce its long-promised national health insurance bill, which may culminate in a battle that has been at least 30 years in the building.

Plus which, consumerism, cost control, health planning, and various unclassified federal intrusions are expected to peak in 1978.

All these subjects will be discussed, formally or informally, in Huntsville at the annual session April 20-22.

Physicians in this state and elsewhere must hang together, in the immortal words of that American patriarch, or assuredly they will hang separately.

Of course, the Huntsville meeting will not be exclusively, or even principally, devoted to the impact of galloping federalism on medicine, as urgent as that subject is. In fact, political controversy and ferment shouldn't even creep into the full day Friday, April 21, devoted to the best scientific programs ever assembled by MASA.

Nor need the subject arise in any of the following, except as individual physicians choose to bring it up;

- ALAPAC's Wine Tasting Reception, to which physicians and their wives (whether or not they are oenologists), are invited, there to meet candidates for public office in this election year;
- The Awards Banquet, always a delightful occasion, when 50-year physicians are honored and recognition extended to doctors and laymen who have distinguished themselves in service to the public;
- The dance following that (until 1 a.m., if you're plucky), brought to you by Mutual Assurance Society;
- The State Board of Health meeting, the only time each year when the full Board convenes;
- The record number of exhibits of the latest in scientific equipment.

Finally, the Madison County Medical Society, hosting the meeting, will be simultaneously celebrating its 100th Anniversary. Other state physicians can help them do that.

To sound our horn a bit:

We think we have put together a pleasing mix of edification and diversion, of enlightenment and just plain fun.

It is the biggest event of the year for Alabama physicians. If it didn't seem so commercial, I could personally offer you a money-back guarantee of satisfaction.

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1. For the relief of symptoms associated with cerebral vascular insufficiency.
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Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

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Parenteral administration is not recommended in the presence of hypotension or tachycardia.

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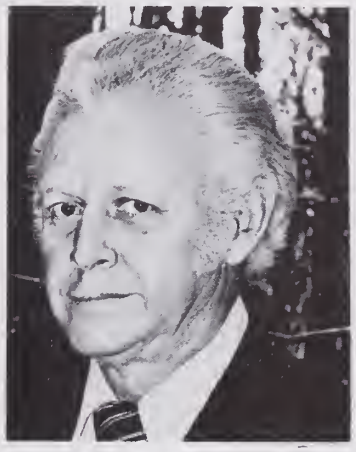
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PRESIDENT'S MESSAGE



Now Is The Time . . .

A few days ago 53 physicians and 40 physicians' wives returned from a weekend in Washington and a dinner with Alabama's Governor, Senator Allen and six of seven members of the House of Representatives. Many principal Washingtons staff members who work with our congressmen were also present.

This impressive pilgrimage of Alabama physicians and wives would not have happened a few years ago. We certainly didn't go to this new mecca for religious reasons, nor was there a single burning issue we wished to protest. I believe we went to bridge a gap that has been present for far too long between elected officials and the medical profession.

We were there in recognition of a startling change in American life. In a single decade the medical profession is being challenged by a bureaucracy with frightening power and billions of dollars to alter medical care.

Throughout this weekend we repeatedly heard one theme: the federal government intends to stop the dramatic escalation in costs of medical care.

How this is to be done was a major reason for our presence in Washington.

In the coming months of 1978 we will elect or re-elect key officials to state and federal government. *Now is the time for you to become involved in who those people will be.* We cannot and must not hide from our time and our responsibilities.

It's no longer sufficient for physicians to use their usual and customary excuses for making token contributions to campaign funds. If we do we will get token consideration when the chips are down.

The only force that stands in the way of new and oppressive legislation aimed at the "rich doctors" will be governors, senators, legislators at the state and national level who will confer with physicians they know and trust and toward whom they feel some sense of responsibility.

Now is the time....

John B. M. Rice, Jr., M.D.



The Physical Suffering Of Christ

"...and so Pilate, willing to content the people, released Barrabas unto them and delivered Jesus, when he had scourged him, to be crucified."—Mark 15:15

By RILEY LUMPKIN, M.D.

Very simple and straightforward — to be scourged and then crucified. Christ was delivered to the Jews by the Roman governor by washing his hands of the whole affair.

Many times in the past, I wondered about the actual cause of Christ's death on the cross. Since becoming a physician and practicing medicine for many years, I have tried to narrow the causes to ones acceptable to the practicing physician. Many books, papers, and articles have been written, but the most comprehensive of all has been by Dr. Pierre Barbet, "A Doctor At Calvary."

Dr. Barbet has done experimental studies on the wounds of Christ and has published, in French, his actual experiments stimulated by the Holy Shroud of Christ at Turrin, Italy.

Many of the thoughts and ideas presented today have been an accumulation of ideas and suggestions gleaned from many medical men, as well as such theologians as Barkley, Haley, and Dake.

It is a nice, neat package to say that Christ was delivered to be scourged and crucified and not understand the true depth of the meaning and the physical suffering at the cross. To this end, explicating the physical sufferings of Christ gives tangible evidence to help understand the impact of the cross.

The passion begins at the Last Supper. Realizing that His betrayal was imminent, as was the end of His humanity, the emotional and mental anguish that Christ suffered must have been severe.

The first actual physical suffering, or passion, was in the Garden of Gethsemene on the Mount of Olives, across the Kedron Valley some 3/4 mile from where the last Passover Supper was shared with the 12. Jesus had three disciples come to the garden to rest and watch as He moved a stone's throw away for His prayer with God.

With the realization of the severe human suffering that Christ was going to submit to, He began to have sweat pop from His body in large amounts that developed into bloody sweat, or hemathidrosis. This is fairly rare in the medical literature but it has been shown to develop with great emotional stress; the capillaries around the sweat glands enlarge and begin to pour out blood in the form of bloody sweat.

This is a generalized condition, weakening the person, and leaving the skin over the entire body very fragile, tender, and sore. It is interesting that this is mentioned and recorded by Luke the Beloved Physician, who gives a little more of a medical view of Christ's sufferings than any of the other apostles.

A betrayal kiss from Judas directs the Sanhedrin guards to Jesus for arrest and trial.

Illegal Council

In an attempt to establish false witness and put Him to death, the illegal council of the Sanhedrin began to question Christ. His refusal to ans-

wer precipitated a violent reaction by Caiaphas, resulting in a hard blow to the face by one of the soldiers.

Nothing is accomplished at this meeting. After more physical torture by the palace guards, they blindfold Him and strike Him in the face and ask Him to prophesy as to who is hitting Him. He is struck in the face many times with slaps and heavy blows as well as spat upon in the face. He is then led from the council chamber through the courtyard.

The agony of the blows to the head, the dizziness from the slapping, and the mental anguish of the spittal is heaped upon a very tender body and an agonized mind. The soldiers tired of this and Christ is left tied and bound in a deep, dark, limestone cavern-like well until daylight when He is again presented before the Sanhedrin.

Christ was now weary, fatigued, thirsty, sore, and suffering from the blows at the inquisition. Still bound, He was led to the other end of town to the Pratorium to the Roman governor, Pontius Pilate.

Christ was presented as one practicing sedition and treason by preverting a nation to rebel, as well as forbidding to give tribute to Caesar and claiming to be a king instead of Caesar. Pilate, knowing that he is being pressured by the Jewish authorities, stated, "I can find no fault with this man," and sends him to Herod Antipas.

Herod cannot get Christ to speak, so returns Him to Pilate. But with the high priests, saying he is no friend of Caesar if he lets Christ go, he realized he was trapped, and being weak, must submit to the Jewist clamor. In an attempt to appease the mob, he offered scourging and release, hoping that the mob may accept pity on a punished man. Christ was scourged, but they still hollered "Crucify Him! Crucify Him!" with great vigor.

Scourging was severe punishment and was done with a whip that had approximately twelve strips of braided leather extending from a handle. Bits of bone and lead at the ends of the leather strip gave it further torturing power. The Jewish law demanded that whipping stop at 40 lashes; but, being very pious, the Pharisees insisted that not over 39 be given in case there is a wrong count. In Christ's case, if He only received 39 strokes of the whip with 12 pieces of leather and bone or lead cutting into His flesh, this would mean a total of 468 different lacerations of the already beaten, bruised and fatigued body. (The Holy Shroud of Turrin suggests more strokes.)

The first few strokes of the whip would tend to bruise the flesh and as other strokes are placed on top of this, the skin is torn and bleeding begins. With the continued whipping, the deeper subcutaneous and muscular tissue is torn and bruised also. When it is finished, His body is a mass of severely lacerated tissue hanging loosely.

Mock Royalty Game

Taking the sign, or titulus, that says "Jesus Christ — King of the Jews," written in Greek, Latin and Hebrew, the Roman soldiers play the game of mock royalty with Christ. They snatched off His robe, reopening the wounds on His back and placed a soldier's robe of purple around His shoulders. They used a large reed for a scepter and plaited a crown of two inch long thorns from a local vine used for firewood.

This was not only a circular band of thorns but those that go over the top like a cap that punctured the entire scalp and forehead. Since it tended to stand up on the tips of the thorns, they hit Christ over the head with a reed, knocking it down into His scalp, causing more bleeding and pain to a highly vascular and sensitive area of the body. Christ was hit, slapped and spit upon by all of the soldiers and was tormented with remarks of His supposed royalty.

The soldiers soon became tired of such a person who accepted the blows, the jeers and the humiliation with no response. Once again, they removed the purple robe from His shoulders, reopening the wounds where the robe had adhered to the already torn and lacerated body of Christ. His own robe was once again placed around His shoulders. Then He was forced to travel the long road of the Via Dolorosa and carry the cross to Calvary or Golgotha, just outside the city wall, some 650 yards away from the Tower of Antonia, the site of His flagellation.

Jesus had to pick up the patibulum (which weighed approximately 110 to 125 pounds) put this over His shoulder and walk up a rocky path to Golgotha. His weakened, dehydrated, bleeding and shock-like condition made the journey even more tortuous. The centurion led the pack, carrying the titulus, announcing the name of the criminal and his crime which is placed upon the cross at the time of the crucifixion. This was to notify all passers-by, and so, be a warning to all law breakers in the future. The Romans were excellent at keeping civil disturbances under control with force and violence.

As Christ struggled up the Via Dolorosa, a ,rough cobble stone road to outside the city wall, He fell many times, struggling with the heavy cross on His back, because of His weakened condition. The centurion, not wanting Christ to die prior to His crucifixion, summoned the aid of Simon to help Christ carry the cross to Golgotha. In any conquered land, when any Roman soldier tapped a conquered citizen on the shoulder with the blade of his lance, this is a direct summons to do the bidding of the soldier.

Punishment For The Unworthy

Crucifixion is a form of punishment which was originated by the Persians for unworthy believers of their god. They would hang the victim by his hands and keep his feet off the ground, since people they crucified were not worth of touching the same ground owned by their god.

This form of torture was picked up by Alexander the Great and was passed on to the Carthagenians, which the Romans copied along with many other styles and practices. The Romans became perfectionists at civil government and execution. The cross consisted of the stipes, which was kept in the ground and formed the upright portion of the cross. It was approximately seven to seven and one half feet tall.

The cross piece or the patibulum, would be palced on top of the stipes in a grooved area that was fitted for the patibulum. This looked like the Greek

letter Tau or the letter "T." On top of this cross the titulus was placed, giving the impression of the Roman cross, with which we are most familiar. Most of the archaeological and historical evidence points to the Greek Tau or letter "T" type cross was used during the time of Christ's crucifixion.

When He reached Calvary, the women of Jerusalem offered Christ a drink in the form of posca or cheap vinegar-wine mixed with myrrh, to relieve His suffering. Christ refused and immediately was thrown to His back to be nailed to the patibulum, the horizontal part of the cross.

A square spike, approximately eight inches long and a third of an inch in diameter, was driven into the wrist between the small bones, since a nail driven into the palm of the hand would not support the weight of the body. There is a space between the carpals known as the space of Destot, proximal to the transverse carpal ligament, giving strength and support for the weight that will be pulled against the spike. As the spike enters the wrist, it tears the median nerve, which causes the thumb to pull into the palm and the fingers to curl into the palm in a claw-like grasp.

This nerve injury sent lightening and burning pain to the brain of Christ, which is already full of suffering from His previous tortures. Another spike is driven into the right wrist with the same affect, placing Christ's arms at a 90° angle with His body.

Thrown In The Dirt

Christ laid in the dirt and filth with His raw back picking up dirt, gravel and trash that adheres to His body when He is lifted up. The patibulum is placed on top of the stipes or the upright portion of the cross. Christ was now supported only by the two spikes in His wrists, causing His body to sag, thus forming with His arms a 65° angle with the cross piece.

The master of execution then hammered a spike through the top of the foot, distal to the inner line of Lisfranc, which is the articulation of the tarso-metatarsal joint. Next the right foot with its volar (sole) surface flat agains tthe stipes, the right knee slightly bent, the left foot was then placed on top of the right foot.

The nail of the left foot is then driven through the same area of the right foot, pinning Christ to the cross with the three spikes. There is very little bleeding from the wounds of the spikes, only great pain due to the severe nerve injury in each of the extremities.

Christ's real suffering was just beginning with His tortured breathing because of the weight of His body pulled down against the spikes in His wrists, which in turn sent jolts of pain along the median nerves. The muscles of inspiration that normally elevates the chest wall and permits the chest cavity to expand, filling the lungs with air, were now stretched to their capacity, allowing air to enter the lungs, but none to be expelled.

Normally, one in his breathing only needs to relax and the muscles will tend to let the chest wall drop down, decreasing the internal pressure forcing the air out of the lungs. In the case of Christ, this was not possible since having all of His breathing musculature stretched to its limit by the weight of the hanging body, normal muscular relaxation could not occur.

To exhale and permit more air to fill His lungs, Christ had to push against the spike in His feet, rubbing His lacerated and torn back against the rough upright of the cross. This action permitted His body to ascend vertically, placing the arms to a horizontal 90° angle, thus permitting the chest wall musculature to relax, producing expiration.

The severe pain created in the feet forced Christ to avoid further pressure there, so relaxing His body would sag, bending both knees. This action recreated the pain and agony shooting along the median nerves of both arms. This desperate action continued for approximately six hours, as recorded in the gospels.

Foreboding Clouds

During this time on the cross, the sky became blackened, clouds rolled in, and the ominous occurence was evident to all observers. His agony and pain continued to increase with the tension of the inspiratory musculature developing severe muscular cramps or spasms, increasing the severe pain of the chest, neck and arm muscles surrounding the chest. His hours on the cross brought on more pain and agony (because of His increasing inability to breathe). This deep, progressive discomfort in His chest begins to increase as the pericardium slowly filled with serum that slowly compressed the heart.

This compression of the heart made it difficult to push the blood through the greatly expanded and almost immobile lungs as well as to the remainder of the body's circulatory system.

How does one with so much pain, injury and torture continue to live? Why does Christ not die?

According to His own words from the cross, we see that He picked the time of His own death, being sure that he had fulfilled His duty, by giving His total being for all Humanity. When He realizes that He has completed His mission of atonement, He finally allows His body to die by asphyxia.

Most of you know the rest of the story about how Joseph of Arimathaea went to Pilate to receive the Body of Christ for burial in his own tomb. The common practice of rushing the death by crurifracture (the breaking of the femurs with a heavy piece of metal) prevents the victim from pushing himself up for another breath and he is rapidly asphyxiated. The legs of the two thieves on either side of Christ were broken, but this was not necessary with Jesus.

The soldier, to be sure Christ was legally dead, thrust a spear through the fifth intercostal space on the right, puncturing the right auricle, which protrudes just to the right side of the sternum. This stab wound released the blood from that chamber as well as the pericardial fluid. This reminds us of St. John's remark "...and immediately there came out blood and water."

So we see that the usual death by suffocation is a big factor, but the cardiac failure, pericardial effusion, the scourging, the shock caused by the penetrating spikes, the hematidrosis and the mental anguish brought on by misunderstanding, betrayal and the sins of the world, are physiological and psychological causes that accumulated and contributed to the death of Christ. However, it is evident that the time of death was selected by Jesus Himself when His mission of atonement was completed.

Thus we have given our senses a chance to physically and emotionally

CONTINUED ON PAGE 47



EMPIRIN® COMPOUND
with CODEINE

Each tablet contains aspirin, 227 mg; phenacetin 162 mg; and caffeine, 32 mg; plus codeine phosphate in one of the following strengths #4—60 mg (gr 1), #3—30 mg (gr ½), #2—15 mg (gr ¼), and #1—7.5 mg (gr ⅛). (Warning—may be habit forming) C-III

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Kaon® Elixir
(potassium gluconate)

Kaon® Tabs
(potassium gluconate)

BRIEF SUMMARY
Kaon Tablets/Kaon Elixir

KAON® (potassium gluconate) TABLETS

Description: Each sugar-coated tablet supplies 5 mEq. of elemental potassium (as potassium gluconate 1.17 Gm.). Kaon Tablets are sugar coated, not enteric coated, which favors dissolution in the stomach and absorption before reaching the small intestine where the lesions with enteric potassium chloride have occurred. The sugar coating merely adds to palatability and ease of swallowing, not to delay absorption as does the enteric coating.
Indications: Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. It may be used in the treatment of cardiac arrhythmias due to digitalis intoxication.
Contraindications: Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.
Warning: There have been several reports, published and unpublished, concerning nonspecific small-bowel lesions consisting of stenosis, with or without ulceration, associated with the administration of enteric-coated potassium tablets alone or when they are used with nonenteric-coated thiazides or certain other oral diuretics. These small-bowel lesions have caused obstruction, hemorrhage and perforation. Surgery was frequently required and deaths have occurred. Available information tends to implicate enteric-coated potassium salts, although lesions of this type also occur spontaneously. Therefore, coated potassium-containing formulations should be administered only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Coated potassium tablets should be used only when adequate dietary supplementation is not practical.
Precautions: In response to a rise in the concentration of body potassium, renal excretion of the ion is increased. With normal kidney function, it is difficult, therefore, to produce potassium intoxication by oral administration. However, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentra-

Time is the test of all things



tions of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

In hypokalemic states, especially in patients on a salt-free diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation. In these circumstances, Kaon (potassium gluconate) should be supplemented with chloride. Ammonium chloride is an excellent source of chloride ion (18.7 mEq. per Gram), but it should not be used in patients with hepatic cirrhosis where ammonium salts are contraindicated. Other sources for chloride are sodium chloride and Diluted Hydrochloric Acid, U.S.P.

It should also be kept in mind that ammonium cycle cation exchange resin, sometimes used to treat hyperkalemia, should not be administered to patients with hepatic cirrhosis.

Adverse Reactions: Nausea, vomiting, diarrhea and abdominal discomfort have been reported. The symptoms and signs of potassium intoxication include paresthesias of the extremities, flaccid paralysis, listlessness, mental confusion, weakness and heaviness of the legs, fall in blood pressure, cardiac arrhythmias and heart block. Hyperkalemia may exhibit the following electrocardiographic abnormalities: disappearance of the P wave, widening and slurring of QRS complex, changes of the S-T segment, tall peaked T waves, etc.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications." Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

KAON® (potassium gluconate) ELIXIR

Description: Each 15 ml. (tablespoonful) supplies 20 mEq. of elemental potassium (as potassium gluconate, 4.68 Gm.) with saccharin and aromatics. Alcohol 5%.

Indications: See Kaon Tablets.

Precautions: See Kaon Tablets.

In hypochloremic alkalosis, potassium replacement with potassium chloride (e.g., Kaochlor® 10% Liquid) may be more advantageous than with other potassium salts.

Adverse Reactions: See Kaon Tablets.

Overdosage: See Kaon Tablets.

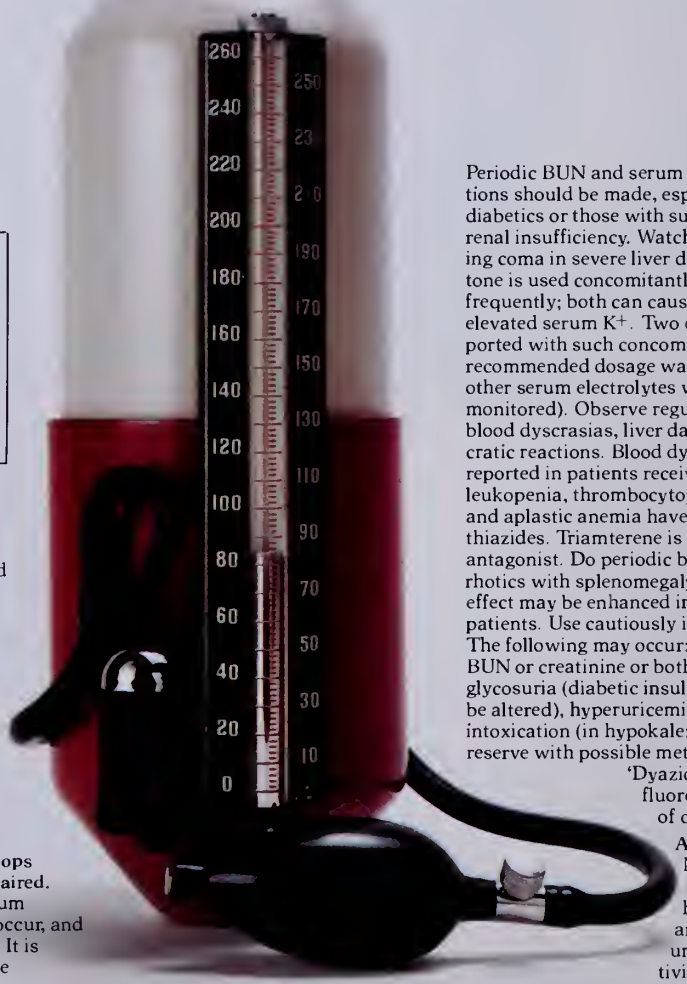
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Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* Warning
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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What is disability?



One of the fondest tenets of a benevolent society is that the "disabled" shall be cared for. Few today challenge this basic humanitarian concept. But Claude L. Brown Jr., M.D., Mobile psychiatrist, questions, in his perceptive article of opinion, whether the original idea of "disability" has now been carried so far that society is actually destroying human lives by assigning them to the slag heap. Human motivation is fragile, he argues persuasively: "Unless the proper spirit exists, all pursuit is fruitless." Quite by chance, arriving almost simultaneously with Dr. Brown's article, was one on the same subject by Mr. Harry N. Hancock, Training Coordinator, Division of Disability Determination, State Department of Education. Mr. Hancock is eager to convey to Alabama physicians just what law and regulation say about establishing "disability," what the physician's function is, and the limitations placed on it. The philosophical questions raised by these two articles are compelling. Among these questions might be: ● Granting the existence of some unquestionable disabilities that prohibit a person from performing any useful function in society, most of those declared "disabled" are not in this category. Are they then victims of the stigma, the despair and futility it forces on them, when history reveals many people of all callings who have risen above their handicaps or compensated for them? ● Is there an iatrogenic element in "disability"? Other questions may occur to physicians as they read these provocative articles which, taken together, may suggest a fundamental reassessment of "disability" as that label has come to mean. Neither Dr. Brown nor Mr. Hancock knew of the other's article prior to publication. The juxtaposition was an editorial decision. □

There are those who are totally disabled. There are many more who have partial disabilities, limitations of functioning. There can be little argument in denying compensation or help for such hurts . . . But the difficulty lies in determining what is a disability, and its degree. . . Common experience shows that people with grevious handicaps accomplish much; others with less disability accomplish nothing. Immediately, we run upon the dilemma of motivation . . .

By CLAUDE L. BROWN, JR., M.D.
Mobile Psychiatrist, Former Member, State Board of Mental Health

A familiar lesson of history is that a concept entirely humanitarian and laudable in its inception often becomes, in its development, a destructive process.

I believe that this is the lesson that we see in a large number, perhaps in the majority, of recipients of welfare benefits, Social Security benefits, Veterans Administration pensions, and compensation benefits from industrial accidents and illnesses.

An accurate estimate of the numbers of persons and dollars involved is most difficult to make, but obviously the numbers are of an astronomical magnitude. A few instances: In a recent issue of *Time* magazine (Aug. 23, 1976) an article focusing on fraud in the Ohio Bureau of Workman's Compensation revealed that fat benefits are paid to disabled workers, with a minimum of controls over the whole system.

And in just one state with a small population, the monthly disbursement of disability benefits from Social Security alone was over $11 million dollars (Alabama - December, 1975).

Such enormous expenditures shown by the above fragmentary examples have dire economic consequences on many fronts, and often have deleterious effects on the beneficiary. Also, this problem will not fade with tommorrow's sunrise; on the contrary, all estimates are that it is burgeoning widely.

Although there are a few bright spots in the picture, the general outlook for solutions to this complex issue is dismal.

Robert is a 55-year-old male in excellent health, with normal intellect and faculties, with no medical or neurological abnormalities, and with no definitive psychiatric disease. He receives a Veterans Administration pension for being 100% disabled and has not worked at all in 30 years.

His records show that he had a psychosis in 1945 while in the military service, for which illness he was treated and eventually discharged from service, and for which illness he drew a pension.

So far, nothing inappropriate. But consider what has happened: In time his psychosis disappeared but his compensation continued. Now, at 55, with a life expectancy of 15 more years, with 30 years of non-work behind him, with complete dependency a way of life, the notion of him becoming a productive citizen is only a fatuous wish—of someone else.

Mary is single, age 24, has worked minimally as a domestic helper. She and her two illegitimate children live with her mother and are supported by welfare.

She is trying to get Social Security disability benefits on the basis that she is totally disabled for her usual work because she has occasional headaches, her feet hurt, she is obese and occasionally short of breath on exertion, and worries about her economic plight. She has no discernible disease.

She has no skills, no motivation for attaining any. She feels helpless, hopeless, and seeks succor.

John, at 45, receives substantial permanent disability payments from the company for which he worked steadily for 20 years. An industrial accident injured his back and doctors stated that he can no longer perform his usual arduous work.

He is thus medically retired as being totally disabled. Although it is true that he cannot perform his customary job, he is far from being totally disabled.

He is well compensated financially, but he is very unhappy. He has a host of shifting, subjective complaints; he is bored, restless, lacks zest, perceives himself as being less of a man, with a blank future.

These illustrations can be multiplied endless times by any doctor, any rehabilitation counselor, social worker, welfare worker, Veterans Administration adjudication officer, and in the offices of Social Security disability determination. And by the insurance departments of industries, and by the lawyers involved in defending against or advocating various disability claims.

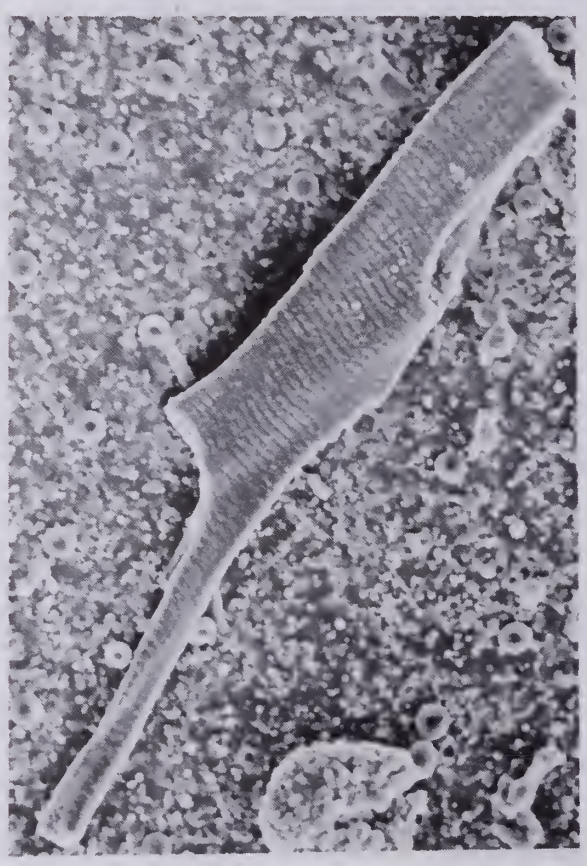
Several major areas need rather drastic re-evaluating. One of these is the concept of disability.

(I do not mean to quibble about definitions. Our society is performance-oriented. By disability I mean, broadly, a reference to constructive activity that one *does* rather than what one thinks or the sensations he may have. Conduct, as is well known, is multi-determined. I am aware that personality structure and functioning is a complex mosaic).

There are those who are totally disabled. There are many more who have partial disabilities, limitations of functioning. There can be little argument in denying compensation or help for such hurts. Such help is just, humane, and may be therapeutic. But

CONTINUED ON PAGE 24

IN THE APRIL ISSUE



Coming in the April Journal—A close look at a basic tool of medical research and service, the electron mircroscope. History, state of the art and potential of the amazing instrument that takes up where the light microscope leaves off to explore heretofore unseen worlds in the body. Interviews with UAB pathologists and technicians and what the EM means to the clinician in cancer, heart and kidney disease, etc. Above: a relative low EM exploration of the heart of a rat. The large object is muscle cell; the donut shapes are blood cells.

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Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

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The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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Please see brief summary of prescribing information on facing page.

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THE CRACKUP, 1936

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1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

Brief Summary of Prescribing Information
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Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

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Dosage and Administration—In mild to moderate anxiety and/or depression: 25 mg t.i.d. Increase or decrease the dosage according to individual response. Daily dosage, up to 150 mg may be taken at bedtime without loss of effectiveness. Usual optimum daily dosage is 75 mg to 150 mg per day not to exceed 300 mg per day.

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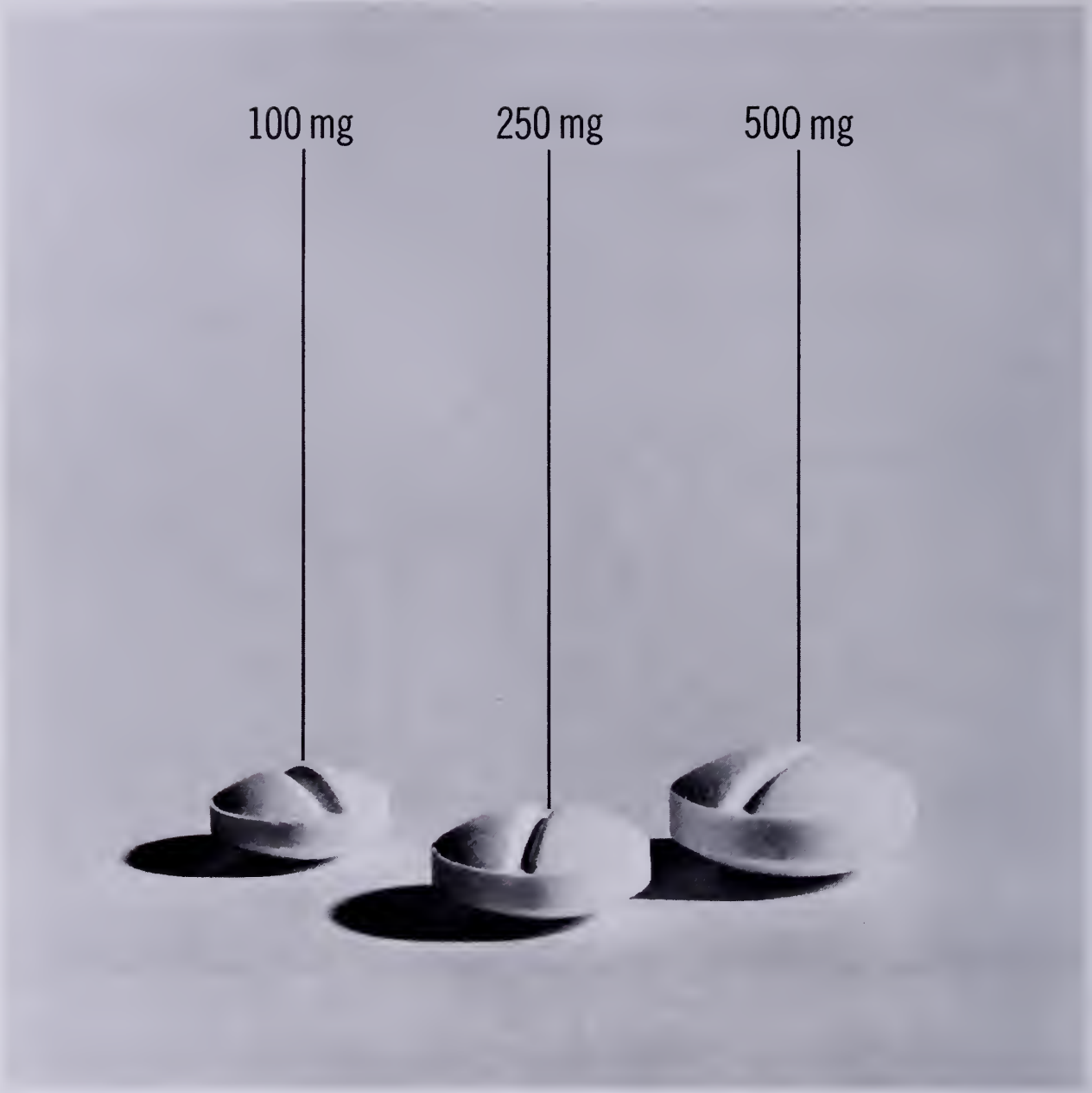

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Clinical Genetics: Whose Business?

Waldimir Wertelecki, M.D.
Professor and Chairman
University of South Alabama
College of Medicine
Department of Medical Genetics
Mobile, Alabama 36617

Is genetics every clinician's business? Is it relevant to primary care? Is the genetic approach essential to understanding of disease? Should the medical community provide the leadership in the importance of genetics to our society?

The answer to all of these questions, we think, is yes. But how should the message be conveyed to colleagues in practice? This is a major concern for a Department of Medical Genetics. There is a significant gap between the accomplishments of genetic biomedical research and the utilization of these advances in clinical medicine.

This task is difficult since the bridge cannot be built by dissemination of information alone without a substantial change of attitudes within the clinical community. Many physicians regard genetics as an irrelevant disruption of primary medical care. Others feel that medical genetics is a specialty that should be relegated to the study of rare or exotic syndromes.

In academic environments, clinical genetics is viewed as insufficiently "scientific" by many "basic" scientists, human geneticists, deans, and policy makers. This remark reminds me that while seeking a fellowship in human genetics I was asked to "burn my stethoscope" and my refusal to do so resulted in rejection. I am glad to say that such attitudes are slowly changing because human genetics today stands primarily on population and medical genetic observations accumulated during the last 20 years.

It is with pleasure that one can contrast the fact that in 1954 we knew of less than 500 gene mutations responsible for human disorders, with the current knowledge of over 1900 additional mutations, techniques of chromosomal identification and mapping, descriptions of hundreds of metabolic disorders and the ability to engage in antenatal diagnostic studies.

These are few of a myriad of major genetic developments which give genetics a special place among the achievements of modern medicine. And yet, the translation of these advances into clinical use constitutes a formidable hurdle for academic institutions and society at large. Nowhere is this challenge discussed with greater eloquence clarity than by Dr. Barton Childs in his address entitled "Persistent Echoes of the Nature-Nurture Argument."[1]

Rarely Found

Departments of Medical Genetics are still rarely found in medical schools. The University of South Alabama, by giving us departmental status, has provided us with the opportunity to bring the genetic approach to all levels of health care delivery in our region.

Since 1975, our emphasis has been to clinically demonstrate the relevance of the genetic approach at all levels of activity within the University's Medical Center. Contrary to common belief, this does not require "special" patients. It is estimated that over 20% of pediatric admissions are related to congenital or hereditary defects and that these disorders affect 15% of our population.

Regardless of whether the patient represents an instance of Down's syndrome, cleft palate, spina bifida, deafness, pigmentary skin disorders, neurofibromatosis, myocardial infarction, carcinoma of the stomach, hematuria, diabetes, or gout, the genetic approach consistently enriches the

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What is disability?

CONTINUED FROM PAGE 17



"His records show that he had a psychosis in 1945 while in the military service . . . for which he was treated, eventually discharged, and drew a pension . . . In time his psychosis disappeared but his compensation continued. Now, with a life expectancy of 15 more years, with 30 years of non-work behind him—complete dependency a way of life—the notion of him becoming a productive citizen is only a fatuous wish . . . of someone else."

the tremendous difficulty lies in determining what is a disability, and its degree.

Common experience shows that some people with grievous handicaps accomplish much; others with less disability accomplish nothing. Immediately, we run upon the dilemma of motivation.

The Emotional Factor

Without attempting any sweeping summary of the involved subject of motivation, I focus upon this axiom: that emotional factors usually play a significant part in any disability, and often play a decisive role in the level of functioning that the person attains.

We try to deal with the effects of the above axiom by employing social workers, rehabilitative counselors, vocational guidance counselors, psychotherapists of all persuasions and abilities – usually in vain.

Shy? In the first place, most of the sinners aren't in church. None of the above-mentioned workers see clients, except fleetingly, unless the person is *seeking* help.

Secondly, to paraphrase Goethe, unless the proper spirit exists, all pursuit is fruitless. Large-scale, successful motivating processes occur only in the field of advertising, not in rehabilitation.

Are there no courts, hearings, and diverse examinational procedures to determine disability more accurately? Yes—and no.

For instance: John Jones fractures his arm at work. It heals properly, all is apparently well. But he says that it hurts too much to perform his usual work, and his company has no other job for him. He is examined by another doctor who thinks that the arm is 50% disabled.

The insurance company doesn't like this and sends him to another doctor who thinks John is malingering. Jones gets a lawyer to help him assert his rights to compensation; there are more examinations; finally the case goes to the mediation board, or court, or judge, and some pronouncement is made.

In theory, this should satisfy the matter. It may be entirely legal, but very often it is more unsatisfactory to one or both parties. Basically, these determinations are made, in large part, by acting upon the personal, subjective philosophy of one person.

True, what objective disability there may be is evaluated and rated, but in the equivocal case the ultimate decision is one that expresses the judge's (or the doctor's or the adjudicator's) special world view as it pertains to this area. Perhaps no better solutions can be found, but I think the effort to find such should be made.

Few Permanently Disabled

There are very few, relatively, who are truly totally and permanently disabled. There are a great many who are partially disabled, yet receive benefits for being totally disabled.

There are also many who are not disabled at all, in the sense of having a designated disease, who receive some type of disability compensation.

This process must be economically disastrous to the Social Security system, to many branches of welfare agencies, and to many corporate entities.

What happens to the beneficiary? (Omitting those who are truly totally disabled, recipients of temporary aid in acute emergencies, and other "appropriate" compensation.)

He is told that he cannot feel the highly important reality-binding aspect of work any longer in his life; that he is not fit to hold any job beneath the sun or moon. He is certified as being worthless and paid to remain so.

Regarded in almost any light, this must be a catastrophic pronouncement. Think of his self-respect, that really priceless ingredient: this item cannot be purchased by power or self,

nor bestowed by God or grant. Everyone craves self-respect; it is an essential part of one's well-being.

The steady erosion of self-worth inevitably causes grave psychopathology. Basically, self-respect can only be earned. Yet the beneficiary is denied this invaluable item.

Never mind that, at one level, he may strenuously seek to wrap himself in this smothering cocoon of dependency. Most of these people are not merely lazy, or malingering, or both. Few people deliberately seek their own destruction, and destruction it is.

Rather, they seek the ostensibly bountiful refuge from personal worth and responsibility because the refuge is blandished before them — indeed, often urged upon them. Nor are the benefactors malevolent. They, too, are usually acting upon sincere motives, sanctioned by laws and girded by elaborate regulations and procedures.

Rather, it is the entire structure of compensation that is often asked in its philosophy and implementation. Because it is a vast morass of problems—vexing, confusing, wasteful and ruinous beyond imagining of economic resources and human lives — our society deals with it as it does so often with harassing issues: it becomes the object of engulfment by an army of people writing procedures, unbelievable amounts of money are spent on it, and everyone crosses their fingers and hopes for the best.

But, plainly, the best is not happening. Despite today's plangent statements about the rights of all people, a prevailing theme of our culture is the de-individualization of man. Nonresponsibility and the implicit affixing of our fates to external forces is an ubiquitous view point.

Somehow the hope creeps into the hearts of too many of us that "the Government" or "Federal money" is truly the rainbow's gold, about to be delivered to our door. And it may well be, but every wage-earner pays severely for this windfall.

The following limited proposals cannot possibly solve many of these immense dilemmas. However, to my knowledge, no one has made such suggestions, and they do offer the soundness of psychological validity and probable economic viability. Thus, these suggestions may be of some value:

I. The people referred to should be required to do regularly constructive activity.

A. An exacting, detailed medical report should be made on each person, from which an estimate can be made of his potential and of his disability.

B. The receiving of their disability compensation, from whatever source, should be contingent upon their regular performance of work assigned. Briefly put, they must *earn* their disability payments.

II. A body of workers to implement job making, job placement, and supervision of attendance and performance.

A. Jobs from whatever sources: industry, government at all levels, businesses of all kinds should be canvassed and jobs found. (How many jobs go undone simply because no one can be found to perform them?)

"... Despite today's plangent statements about the rights of all people, a prevailing theme of our culture is the de-individualization of man..."

B. Placement of the beneficiary in a job compatible with his limitation — supervision of his attendance and performance.

C. Change assignments as the person improves or regresses.

D. Continuation of compensation until person improves enough to hold better jobs; then reduce compensation proportional to ability to earn more income from other sources.

E. Simultaneous with the above, continued efforts at rehabilitation training, medical treatment, etc.

The above suggestions are very general, of course, and require modification. The critical features are: compensation being contingent upon regular, constructive activity (disability compensation must be earned), and the creation of work opportunities plus the supervision of these.

"...the hope creeps into the hearts of too many of us that 'the Government' or 'Federal money' is truly the rainbow's gold, about to be delivered to our door... and it may well be, but every wage-earner pays severely for this windfall..."

Whether such an approach is feasible, I do not know. I do know that successful rehabilitation under any other plan is minimal and unpredictable.

Contraindication to such a program may stem from the creation of untenable economic problems. I am not capable of assessing the extent of such problems. The existing system, however, clearly does create massive problems; perhaps a change for a possibly better course is indicated.

The Human Spirit

Objections to this program based on the assumption that the beneficiary is being treated harshly are, I think, not accurate. There will be no disruption of the person's life, liberty, or pursuit of happiness. Adequate attention will be paid to his disability, but his disability will not be the sine qua non of him as an entity.

He will live as a significant person, with potential that is being enhanced, rather than as an object of sympathy or contempt whose disability is being reinforced. The human spirit stumbles over its inexorable burdens, yet it struggles resiliently towards some goal — even if that goal is simply existence.

I believe that these millions of citizens can be aided in finding more fulfilling goals than mere existence. Such fruits must be far more nutritious to the person, and to his society.

PLEASE TURN PAGE →

What is disability?

Sometimes the medical view of disability and the administrative view are two different things, as Mr. Hancock explains.

"Physicians in Alabama are called upon almost daily to provide reports to agencies as to whether their patients are "disabled." Some of these agencies require nothing more than a statement from a physician . . . Some physicians become confused and upset when, after declaring their patient 'totally and permanently disabled,' they learn that the claim was subsequently denied by the Division of Disability Determination . . ."

By HARRY N. HANCOCK*

The Division of Disability Determination (Department of Education) is the contractual state agency responsible for determining eligibility for Social Security and Supplemental Security Income (SSI) disability benefits.

The Division is located in Birmingham and has statewide responsibility for all Social Security and Supplemental Security Income disability claims filed in Alabama. The quality of the decisions rendered by the Division is dependent upon the quality of the medical information received from the physicians and medical institutions in Alabama.

Physicians in Alabama are called upon almost daily to provide reports to agencies as to whether their patients are "disabled." Some of these agencies require nothing more than a statement from a physician that the patient is, or is not, "disabled" or "totally and permanently disabled."

Certainly, all physicians are capable of determining if their patients are "disabled," since disability, by definition, is the "inability to pursue an occupation because of a physical or mental impairment."

Therein lies the Disability Determination Division's biggest communication problem with the Alabama medical community. Perhaps if we substituted "eligibility" for "disability" we could avoid some of the communication pitfalls we now encounter. There are two components inherent in the determination of eligibility for Social Security disability benefits — medical and administrative. These components are distinct and separate.

Many physicians feel, because of their experience with other disability related agencies, that it is their function to determine Social Security eligibility. Some physicians, therefore, become confused and upset when, after declaring their patient "totally and permanently disabled," they learn that the claim was subsequently denied by the Division of Disability Determination.

For Social Security purposes, the *medical function* is to provide an assessment of the patient's impairment in terms of severity, prognosis, duration and functional loss. In other words, considering the patient's impairment, how is he limited as to the type and amount of work he can perform?

The *administrative function* is to apply the physician's assessment to the statutory requirements and to make the eligibility determination. This assessment must be based on stringent application of specific Social Security regulations and guidelines.

Physicians in Alabama are, therefore, relieved of the responsibility of explaining to their patients why their disability claim was denied. Physicians should refer their patients to the local Social Security office for an explanation.

The Social Security regulations are specific on the type medical evidence that is required to document an individual's physical or mental impairment. The regulations require that medical reports, copies of medical records or other medical evidence submitted to substantiate the allegations should include reports of clinical findings, laboratory findings, diagnosis and treatment prescribed and response.

The regulations specifically require that the clinical and laboratory findings be sufficiently comprehensive and detailed to permit the making of independent determinations of eligibility by anyone familiar with the statutory requirements.

The regulations also specify that a statement by a physician that an individual is, or is not, "disabled," "permanently and totally disabled," "totally disabled," "totally and permanently disabled," "unable to work," or a statement of similar import, shall not be determinative of the question of whether an individual is eligible for disability benefits.

The weight to be given such a physician's statement depends on the extent to which it is supported by specific and complete clinical findings and the extent to which it is consistent with other evidence as to the severity and probable duration of the individual's impairment(s).

For this reason, the Division of Disability Determination is unable to accept physician's conclusions unless these statements are supported by the specific clinical findings. Although the Division's disability examiners have unquestionable respect for the professional integrity of the Alabama physicians and their opinions, the Social Security guidelines specifically regulate acceptance of conclusions by physicians without the supportive clinical evidence.

By improving on this joint effort, the Division of Disability Determination and the treating physicians of Alabama can continue to provide the best possible service to the disabled citizens of Alabama. ☐

***Training Coordinator, Division Of Disability Determination, Department Of Education, State Of Alabama.**

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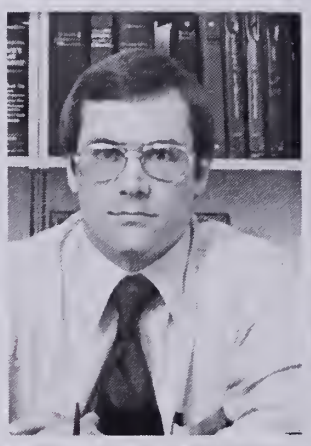
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Penicillin Allergy

Mary Pat Hemstreet, M.D.*

Penicillin, since its discovery by Fleming, has been a wonder drug. While all physicians have witnessed its efficacy, allergic reations to the drug have also occurred. The purpose of this article is to bring into focus some of the immunological aspects of penicillin allergy as well as the most recent guidelines for testing the patient with a supposed penicillin allergy.

STATISTICS:

The incidence of penicillin allergy in the general population ranges from 1-10%; that of anaphylactic reactions between 10-40 per 100,000 injections. The risk of *fatal* anaphylaxis is approximately 2 per 100,000 injections.[1]

IMMUNOGENICITY:

As is common with many drugs, penicillin is rendered immunogenic only when it is biologically degraded. The chemically reactive metabolite then binds firmly with the tissue or serum proteins to form an antigenic moiety. In the case of benzylpenicillin, approximately 95% of the drug is degraded to form benzylpenicillenic acid which when combined with protein forms the benzylpenicilloyl hapten (BPO).

While this antigenic determinant is thus referred to as the major determinant, benzylpenicillin appears to be degraded into a myriad of other antigenic determinants. The exact nature of these minor determinants has not been elucidated but they are thought to include benzylpenicillin, benzylpenicilloate, benzylpenilloate, and alphabenzylpenicilloylamine. (Figure 1)

When one considers the chemical structure of penicillin (Figure 2), it is the 6-amino penicillanic acid (APA) nucleus which is responsible for most of the antigenic activity of the drug. Multiple

PENICILLIN ALLERGY

A. Major Determinant = 95%

-benzylpenicillenic acid → benzylpenicilloyl haptenic group (BPO)

B. Minor Determinants = (MDM) = 5%

-benzylpenicillin
-benzylpenicilloate
-benzylpenilloate
-benzylpenicilloylamine

Figure 1: Determinants of benzyl penicillin

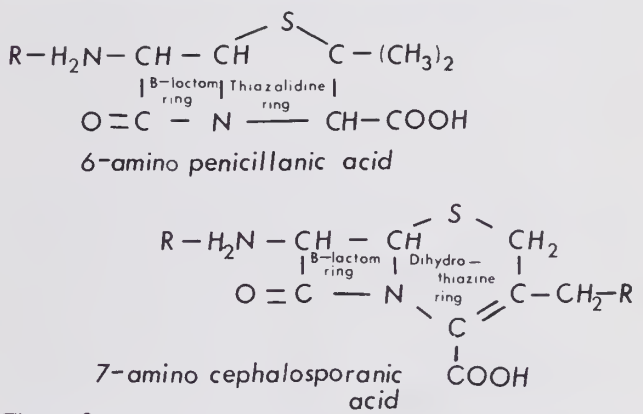


Figure 2.

semisynthetic penicillins have been produced by "variations on the theme," that is, modifications of the side chain R. These drugs, however, contain the same basic 6 APA nucleus, and hence, portend the same danger to the "penicillin sensitive" patient, as does penicillin.

The cephalosporins differ from the penicillins as the antigenic moiety is a 7-amino-cephalosporanic acid (Figure 2). These drugs do however contain a beta-lactam ring just as do the penicillins. Thus, antigenic determinants may develop through beta-lactam carbon protein conjugation. Because of this, patients with a history of penicillin allergy have four times as many allergic reactions to cephalosporin treatment, as do those without a similar history. A positive skin test to the major determinant of penicillin in these patients further increases the possibility of an allergic reaction to 50%.[2] →

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Table 1.

CLASSIFICATION OF REACTIONS

TIME	REACTION	AB	VS.	DETERMINANTS
1 hour (immediate)	Anaphylaxis Pruritis (most Urticaria Common) Angioedema	IgE		Minor
	Rhinitis (less Asthma common) Laryngeal edema			
1-72 hours (accelerated)	Urticaria Angioedema Laryngeal edema Hypotension & death (rare)	IgE		Major
2-4 days (accelerated serum sickness)	Cutaneous Systemic	IgE Toxic Ag-Ab Complexes IgG IgM		?
3 days (late)	Benign skin eruptions - (exanthems of trunk and proximal extremities) Stevens-Johnson Syndrome (rare)	IgM		Major
6-21 days	Serum-sickness like reaction Cutaneous manifestations Systemic	IgG IgM, IgG Ag-Ab complex		
Late reactions	Drug Fever Hemolytic Thrombocytopenia Renal failure (Interstitial nephritis & tubular damage)	IgG, IgM IgG, IgM ? Type IV		?
3-21 days after penicillin discontinued	Syndrome of recurrent urticaria and arthralgia	IgE		Minor
Delayed reactions (Type IV)	Contact dermatitis Systemic reaction	? Cell mediated Cell mediated		

Table 1: Classification of reactions according to time and antibody against the determinants of penicillin.

Figure 3. SKIN TESTING FOR PENICILLIN

I. Major Determinants
   A. Scratch
      (1) Control
      (2) Pre-Pen 6 x 10^{-5} M
   B. Intradermal
      (1) Control
      (2) Pre-Pen 6 x 10^{-5} M
      (0.01 to 0.02 cc)

II. Minor determinants
   A. Scratch
      (1) Control
      (2) Aq. Pen. G. 5 units/cc
   B. Scratch
      (1) Control
      (2) Aq. Pen G. 10,000 units/cc
   C. Intradermal
      (1) Control
      (2) Aq. Pen G. 10,000 units/cc
      (0.01 to 0.02cc)

Clinical Presentation And Immunologic Response:

The clinical presentation of allergy to penicillin may be varied and appear as:

1) Systemic anaphylaxis — the skin, respiratory, gastrointestinal or cardiovascular systems may be involved.

2) Serum sickness — fever, joint symptoms, lymphadenopathy, skin eruptions.

3) Cytotoxic reactions directed toward individual organs as in methicillin associated nephritis.

4) Cutaneous reactions — diffuse maculopapular rash, urticaria, angioedema.

5) Fever

How does one respond immunologically to penicillin? Both humoral and cellular responses occur. Penicillin elicits antibodies in several classes to both the major and the minor antigenic determinants.[3]

In patients without a history of prior penicillin administration, low titers of IgM antibodies can be detected probably as a result of exposure through contamination from various food and drug products. The administration of penicillin evokes a variable rise in the various immunoglobulin classes. In a recent study done by Adkinson 55 patients on penicillin therapy were studied with regard to the development of serum IgE and IgG antibodies to the major determinant of penicillin, BPO.[4] Six out of 55 patients developed both IgE and IgG antibodies to the major determinant. Two of these patients were skin tested and were positive. Penicillin was continued in all 6 patients without any adverse response. In 27 of the 55 patients only IgG antibodies developed to the major determinant. And, finally, in 22 of the 55 patients there were no particular antibody responses to the BPO.

It is interesting that the specific IgG response in the patients also having an IgE response was significantly higher than in those patients having only an IgG response — almost as if this were a protective mechanism. It also appeared from this study that the BPO IgE production was not dependent on dose, duration of therapy, or on the atopic state.

Cell mediated immunity also appeares to play a role in the genesis of penicillin allergy. Recent investigations[5] report a positive leukocyte stimulation response (an in vitro measure of cell-mediated function) noted in those patients who had immediate reactivity to the penicillin minor determinants. Thus it appears that penicillin allergy evokes both B cell (antibody) and T cell (cell-mediated) responses — a finding coincident with animal studies showing that IgE antibody responses are particularly influenced by helper and suppressor T cells.

Classifications Of Allergic Reactions:

The allergic responses that occur to penicillin may be classified according to time, and to antibody formation against the minor or major deterrminants (see Table 1).[6]

Immediate reactions: Those reactions occurring within the first hour after the administration of penicillin are classified as immediate. Clinical manifestations may involve any or all of the facets of anaphylaxis; that is, pruritis, urticaria, angioedema, asthma, laryngeal edema, and cardiovascular hypotension. The antibody responsible for the immediate reactions belongs to the IgE class and is directed against the *minor determinants.*

Accelerated reactions: Those reactions which occur within 72 hours of the administration of penicillin are considered accelerated reactions. The manifestations may be urticaria, angioedema, and laryngeal edema. Less commonly there is hypotension and death. In this case the antibody involved is the IgE antibody directed against the *major determinant* of penicillin.

Accelerated serum sickness: This reaction occurs within 2-4 days after the administration of penicillin. Its rapidity of onset usually implies a prior exposure to the drug. Clinical actions are both cutaneous and systemic. IgE antibody is thought to be responsible for the cutaneous manifestations; IgG and IgM antibodies for the soluble antigen antibody complexes producing the systemic response.

Late response: Reactions to penicillin which occur approximately three or more days after the administration of penicillin are usually associated clinically with benign skin eruptions. These appear as exanthems on the trunk and the proximal extremities. Rarely does the Stevens-Johnson Syndrome appear. The antibody in this case is thought to be an IgM antibody directed against the major determinant.

Serum sickness: Serum sickness-like reactions may occur approximately 6-21 days after the administration of penicillin. Again, both the clinical manifestations and the antibodies responsible are similar to the accelerated serum sickness described above.

Recurrent Urticaria and Arthralgia Syndrome: A syndrome of recurrent urticaria and arthralgia subsequent to the administration of penicillin has been described.[6] The time sequence on this is approximately 3-21 days after the penicillin has been discontinued. In this case the antibody is thought to be an IgE antibody directed against the minor determinants. The mechanism involved is unknown.

Late reactions: There have been variable clinical reactions associated with and at times following administration of penicillin. These include drug fever, hemolytic anemia, thrombocytopenia, and renal failure (interstitial nephritis and tubular damage). The exact mechanism by which these occur has not been defined in each case. Both IgG and IgM antibodies have been implicated.[7,8] There is also some question whether or not a type IV hypersensitivity reaction (delayed reaction) is involved.

Delayed reaction (type IV hypersensitivity): Clinically this appears as a contact dermatitis or as a systemic manifestation of penicillin hypersensitivity, as the more recent investigations have shown. While this was thought to be primarily a cell mediated immunologic phenomenon, it now appears that T (cell mediated) and B (antibody) cells may be acting in concert.

Skin Testing For Penicillin Allergy

Materials are presently available to aid in the diagnosis and the prognosis of the penicillin sensitive individual.

Several questions arise.

1) Who is to be skin-tested?

2) What materials are to be used?

3) How is this to be done?

4) What are the guarantees that the results give a patient?

5) What other in-vitro methods are available to aid in this diagnosis?

Who is to be skin-tested? Candidates are those patients who are labeled "penicillin sensitive" but who have a questionable history. Those patients with a reliable history of an anaphylactic or systemic reaction to the drug obviously need no skin-testing. Other candidates are those patients with a reliable history but whose reaction occurred many years ago.

Studies have shown a decrease in the positivity of skin tests to penicillin with the passage of time since the initial reaction. The best time to test for penicillin allergy is approximately 4-6 weeks after the reaction has occurred. A time delay in testing is desirable because some patients may demonstrate anergy immediately following the primary allergic response.

What materials are to be used? To adequately skin test for penicillin allergy, both Pre-Pen (Kremers-Urban Company) and Aqueous Pen G must be used.[9] (Figure 3). Pre-Pen is actually penicilloyl-polylysine and detects *major determinant* sensitivity. This is available in a 1 cc. vial ready for use. →

Figure 4.

PROTOCOL FOR SKIN TESTING FOR PENICILLIN ALLERGY

Use ventral surface of lower forearm for skin-testing. Prepare surface by wiping several times with alcohol.

I. Skin testing for the "major determinants" (Penicilloyl-Polylysine) Pre-Pen

A. Scratch Test

(1) Control(saline)
(2) Pre-Pen 6×10^{-5}M

*Wipe off with water after 15 minutes. Read for erythema and wheal. A POSITIVE response consists of a pale wheal usually with pseudopods surrounding the scratch site and varying in diameter from 5-15 mm (or more). This wheal may be surrounded by a varying degree of erythema and accompanied by a variable degree of itching. If the scratch is negative or equivocally positive, an intradermal test may be done.

B. Intradermal Test:

(1) Control(saline)
(2) Pre-Pen 6×10^{-5}. Using a TB syringe with a 27 gauge ½ inch needle, inject intradermally 0.01 to 0.02 cc.

**Most skin reactions will develop within 5-15 minutes and the response to the skin test is read as follows:

(-) Negative: No increase in the size of the original bleb and/or no greater reaction than the control site.
(+) Positive response: Itching and marked increase in the size of the original bleb. The wheal may exceed 20 mm in diameter and exhibit pseudopods. Note that the control site should be completely reactionless!

II. Skin Testing for the "minor determinants" (Aqueous Penicillin G). If patient is very sensitive by history do A. If not proceed directly to B.

A. Scratch Test: (1) Control(saline)
(2) Aqueous Potassium Penicillin G 5 units/cc

B. Scratch Test: (1) Control(saline)
(2) Aqueous Potassium Penicillin G 10,000 units/cc

Wipe off with water and read as indicated ***. Proceed with intradermal if Scratch test is negative.

C. Intradermal: (1) Control (saline)
(2) Aqueous Potassium Penicillin G 10,000 units/cc. Using a TB syringe with a 27 gauge ½ inch needle, inject intradermally 0.01 to 0.02 cc.

Read as indicated **.

Aqueous penicillin G detects *minor determinant* sensitivity[10] and should be freshly prepared in concentrations of 5 units per cc. and 10,000 units per cc. A suggested protocol for skin-testing for penicillin allergy is outlined in Figure 4.

What are the guarantees that this skin-testing system offers? A negative skin test to Pre Pen is associated with an incidence of allergic reactions of less than 5% after the administration of therapeutic penicillin, whereas the incidence may be more than 20% in the presence of a positive skin test of Pre-Pen.

A negative skin test to the penicillin G material decreases the likelihood of an immediate and accelerated urticarial response to the drug. It should be borne in mind, however, that no reagent, test or combination of tests will completely assure that patient that a reaction to penicillin treatment will not happen.

It is to be noted that immediate skin testing as described above is indicative only of an IgE antibody response to the antigens. It does not detect an IgG nor an IgM response. This is to be kept in mind when the patient's history indicates that the allergy was manifested by a macular papular eruption. In most instances this type of response is IgM mediated. Since the immunologic response in these patients is different, there is no need to discontinue the drug as long as the clinical indications for the drug persist and more serious reactions do not occur. There is presently no data to suggest that these patients are at a greater risk to develop IgE mediated hypersensitivity with subsequent administration of penicillin.

Other modes of diagnoses available to date. Presently there is available the RAST assay (Radioallergosorbent Test) which is comparable to an in vitro skin test. The RAST involves the use of a cellulose disc with the specific antigen attached to it. In this case the antigen would be either the major or minor determinant of penicillin. (See Figure 5). The serum of the patient which would contain the specific IgE antibody to the determinant is added to the test system.

As a marker a labeled anti-IgE antibody is then added to the system. The amount of antibody present in the patient's serum is directly proportional to the amount of radioactivity that is detected by the gamma counter. While this assay has been shown to have good clinical correlation with regard to the major determinant,[11] the technique for the minor determinants has not been perfected. →

Table 2. SUGGESTED RAPID DESENSITIZATION SCHEDULE FOR PENICILLIN *

A. Preparation of solutions, using aqueous crystalline penicillin G

Dilute 20,000,000 unit vial to 20 ml = 1,000,000 units/ml (solution 1).

Dilute 1 ml of solution 1 to 10 ml = 100,000 units/ml (solution 2).

Dilute 1 ml of solution 2 to 10 ml = 10,000 units/ml (solution 3).

Dilute 1 ml of solution 3 to 10 ml = 1,000 units/ml (solution 4).

Dilute 1 ml of solution 4 to 10 ml = 100 units/ml (solution 5).

B. Application (Not needed if skin testing already done. Proceed to C.)

1. Administer scratch test (15 min) with 1 drop of solution 3 on forearm.

2. Administer intradermal test (15 min) with 0.02 ml of solution 5.

3. Proceed with penicillin administration as outlined in C. Record blood pressure, pulse, and respiration at frequent (5 min) intervals and have emergency equipment** always at hand.

4. Immediately begin continuous therapy with intravenous penicillin G.

C. Details of penicillin administration for Step B-3.

Penicillin Solution			
Solution Number	Concentration	Injected Each 15 min.	Injected Subcutaneously
	units/ml	ml	units
		0.05	5
		0.1	10
5	100	0.2	20
		0.4	40
		0.8	80
		0.15	150
4	1,000	0.3	300
		0.6	600
		1.0	1,000
		0.2	2,000
3	10,000	0.4	4,000
		0.8	8,000
		0.15	15,000
2	100,000	0.3	30,000
		0.6	60,000
		1.0	100,000
		0.2	200,000
1	1,000,000	0.4	400,000
		0.8	800,000

* From Green, G.R. In Stewart, G.T. and McGovern, J.P.: Penicillin Allergy. Courtesy of Charles C. Thomas, Springfield, Ill., 1970.

** Syringes, hypodermic needles, alchhol, sponges, and drug for injections: epinephrine (aqueous, 1:1,000) and ephedrine; intramuscular chlorpheniramine (Chlor-Trimeton; metaraminol or phenylephrine; levarterenol (Levophed); sodium bicarbonate; aminophylline; corticosteroids.

Equipment for intravenous infusion and tracheostomy, including tourniquet, venous cutdown equipment, and 5% glucose: sphygmomanometer and stethoscope; oxygen tank, with mask or intranasal tube, or bag and valve equipment; endotracheal tube.

Rapid Desensitization: Should a patient need penicillin despite a reliable history of sensitivity or a positive skin test response, one may use a rapid desensitization schedule as outlined in Table 2.[12]

We may then summarize the state of the art with regard to skin testing for Penicillin Allergy as follows:

1. Skin testing with Pre Pen detects only IgE mediated hypersensitivity.
2. *Pre Pen* positivity is associated mainly with dermatologic reactions, that is, urticaria.
3. Aqueous penicillin G possitivity is associated with systemic anaphylaxis.
4. Skin testing with both Pre Pen and aqueous penicillin G is necessary to assess possible acute reactions to penicillin.
5. Skin testing with these materials is of no value in detecting macular papulareruptions and serum sickness reactions.
6. Negative skin tests do not mean a guarantee against a penicillin reaction.
7. In-vitro serum studies (RAST) appear to be valid but are not commercially available at present.

□

References

1. Idsoe, O., Guthe, T., Wilcox, R. R., and De Weck, A. L.: Nature and extent of penicillin side-reactions, with particular reference to fatalities from anaphylactic shock. Bull. WHO 38:159,1968.
2. Thoburn, R., Johnson, J. E., III, and Cluff, L. E.: Studies on the epidemiology of adverse drug reactions. IV. The relationship of cephalaothin and penicillin allergy. JAMA 198:345, 1966.
3. Levine, B. B., Redmond, A., Fellner, M., Voss, H. E. Levytska, V.: Penicillin allergy and the heterogeneous immune responses of man to benzyl penicillin. J. C. I. 45:12, 1966.
4. Adkinson, N.F., Jr., Quantitative studies of the IgE and IgG immune response to penicillin administration in man. Presented at the American Congress of Allergy and Immunology, New York, March 31, 1977.
5. Warrington, R. J., Sehon, A. H., Tse, K.S. In vitro tests of cell-mediated (CMI) in adults with immediate penicillin (PEN) hypersensitivity. Presented at the American Congress of Allergy and Immunology, New York, March 31, 1977.
6. vonPirquet, C. F., and Schick B.: Die Serum Krankheit. Leipzig, Weir, 1905. English trans. Serum Sickness. Baltimore, Williams and Wilkins, 1951.
7. Peters, G. A., Moskowitz, R. W., Prickman, L. E., and Conger, H. M.: Fatal necrotizing angiitis associated with hypersensitivity to penicillin O and iodides. J. Allerg. 31: 455, 1960.
8. Reisman, R. E., Rose, N. R., Witebsky, E., and Arbesman, C. E.: Penicillin allergy and desensitization. J. Allergy. 33:178, 1962.
9. Tests for Penicillin Allergy. Medical Letter June 20, 1975, pp. 54-55.
10. Parker, C. W., Drug Allergy, N. Engl. J. Med. 292: 957, 1975.
11. Wide, L. and Julin, L. Detection of penicillin allergy of the immediate type by radioimmunoassay of reagins (IgE) to penicilloyl conjugates. Clin. Allergy 1:171, 1971.
12. Green, G. R. In Stewart, G. T. and McGovern, J. P., Penicillin Allergy. Charles C. Thomas, Springfield, Illinois, 1970.

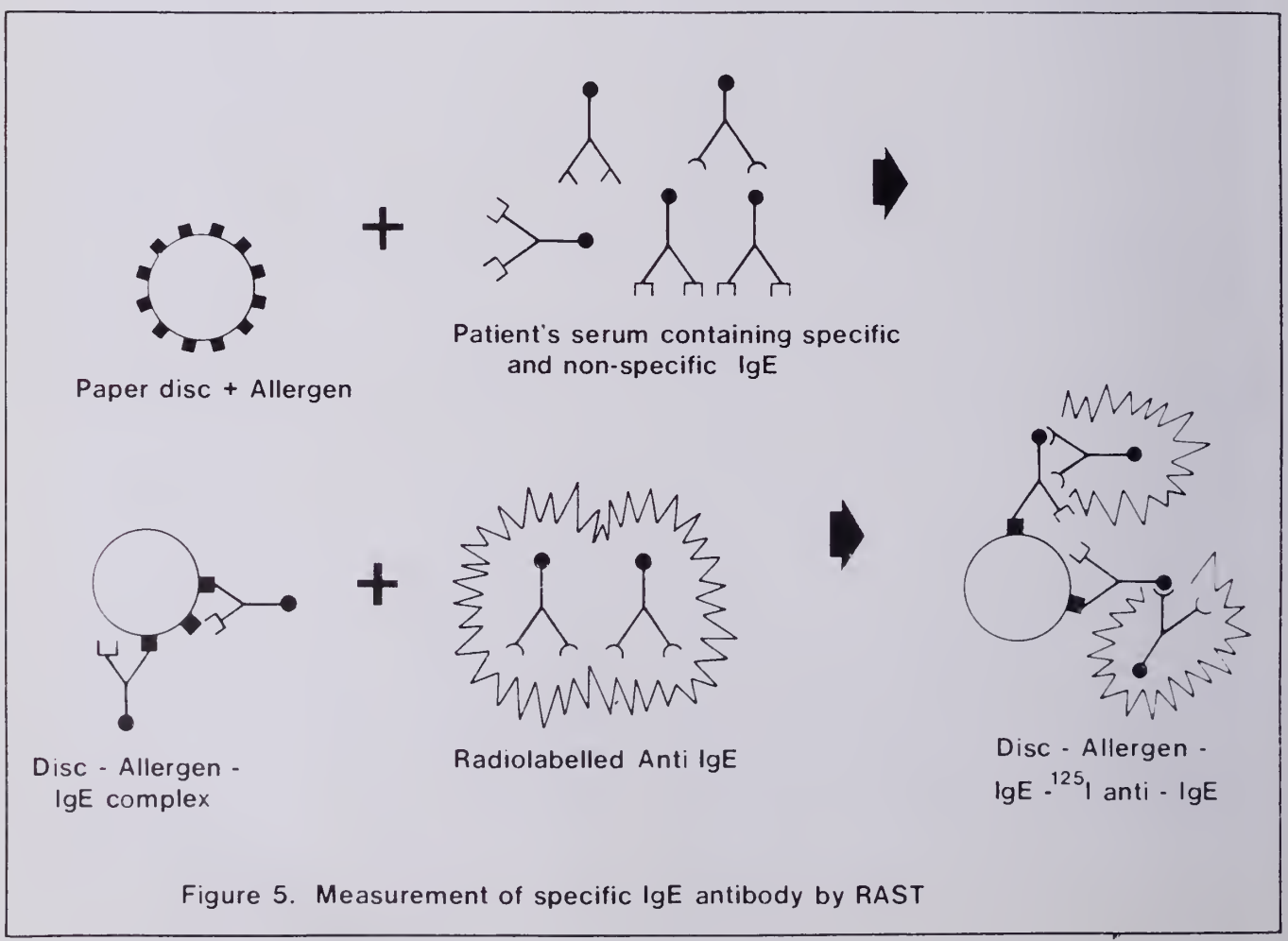
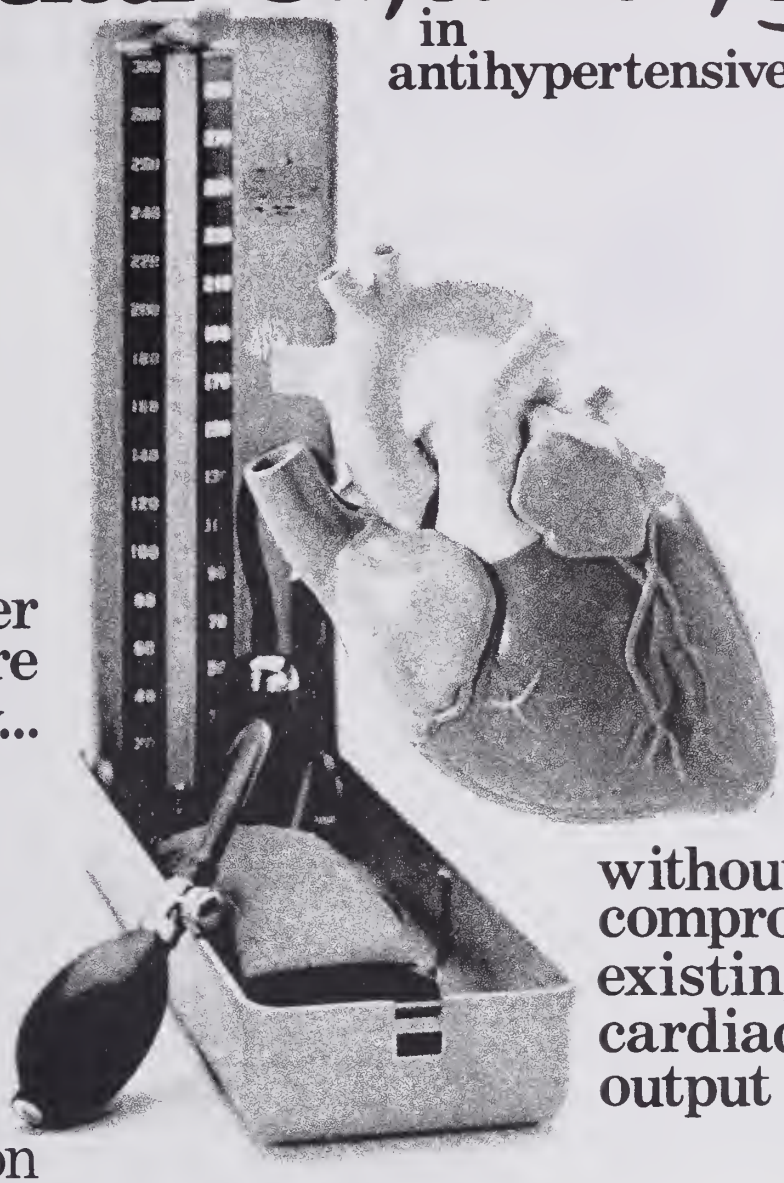


Figure 5. Measurement of specific IgE antibody by RAST

A Dual Challenge

in
antihypertensive therapy



to lower
blood pressure
effectively...

without
compromising
existing
cardiac
output

in hypertension

TABLETS: 250 mg, 500 mg, and 125 mg

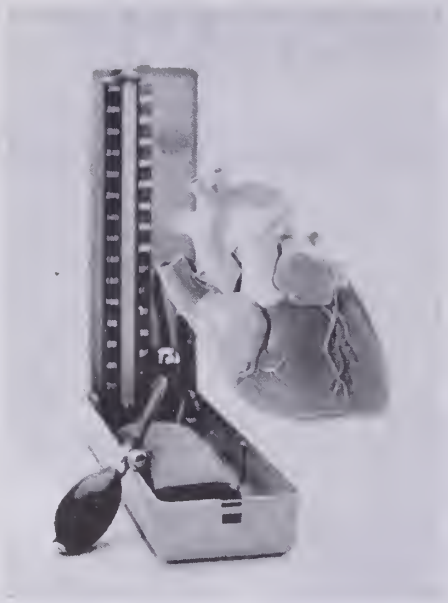
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usually with no direct effect on
cardiac function–cardiac output
is usually maintained

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

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helps lower blood pressure effectively... usually with no direct effect on cardiac function– cardiac output is usually maintained

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, occasionally with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Pregnancy and Nursing: Use of any drug in women who are or may become pregnant or intend to nurse requires that anticipated benefits be weighed against possible risks; possibility of fetal injury or injury to a nursing infant cannot be excluded. Methyldopa crosses the placental barrier, appears in cord blood, and appears in breast milk.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: urinary uric acid by the phosphotungstate method, serum creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia. Positive tests for antinuclear antibody, LE cells, and rheumatoid factor.

Allergic: Drug-related fever, lupus-like syndrome, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third months of therapy; increased dosage or adding a diuretic frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

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Identification Of The High Risk Pregnancy And Of The Fetus At Risk

Richard C. Stuntz, M.D., FACOG, FACS*

Summary

The common goal of modern obstetrics and pediatrics is to improve the quality of maternal, fetal, newborn, and infant life; and the basic cornerstone upon which perinatal care rests is in the identification of problems. By identifying, evaluating, and managing these difficult cases, reduction in perinatal and maternal morbidity and mortality will be possible.

The common goal of modern obstetrics and pediatrics is to improve, to the limits imposed by the state of present knowledge, the quality of maternal, fetal, newborn, and infant life in such a manner as to give every individual conceived the greatest opportunity for optimal physical, mental, and emotional development.

This goal is increasingly important; it is challenging, pertinent, but extremely difficult. It is important because the medical care system must have as its primary goal the prevention of human ills of all forms, and prevention cannot be more possible than if begun at or even before the point of conception of new life.

It is challenging because the stakes are high, not only as measured by perinatal mortality, but also as measured by the awesome and tragic effects of sublethal perinatal morbidity on the individual, the family, and on society.

It is pertinent because of the overwhelming evidence that in this nation, the quality of human reproduction is not as good as it should be, particularly with regard to late fetal and neonatal mortality and morbidity.

Finally, the goal is difficult because its obtainment is inseparably bound up with the optimal use of health-care personnel, the appropriate application of health-care dollars, and the proper utilization of the technological and knowledge explosion. Nevertheless, this is our challenge, and this is our responsibility.

Let us suppose that the next patient you see in your office is 14 years old and pregnant. This is her first antenatal visit to you. What problems does this patient present? Obviously, her age and her small size might mean obstetric difficulties. What other problems can we anticipate, what other difficulties must we look for during her prenatal care, during her labor and delivery, during the puerperium, and during the infant's first few days of life?

First, The Problem

The basic cornerstone upon which perinatal medicine rests today is the identification of the problem. The largest number of infants at risk, not surprisingly, are born of mothers who exhibit at risk potential prior to or during their pregnancy.

I intend to detail some of the methods of identifying and evaluating obstetric patients who have a high risk of developing complications. Identification, evaluation, and proper management of these difficult cases will help to reduce perinatal and maternal morbidity and mortality.

It is my firm belief that a focus on perinatal health begins with anticipation and the appropriate care of the prospective mothers. This must commence preconceptionally if optimal results are to be achieved in childbearing. Perinatal outcome mirrors the standard of general health-care and the quality of female health supervision, beginning at a very early age.

Obstetric concerns are interwoven with most of the ills of society and important in these considerations are erosions of family life and irresponsibility in family planning. Certainly, family planning is an integral part of high risk obstetric programming. Responsibility in this area falls within the province of multiple disciplines, and directs as much attention upon adolescents and young women about to be married as upon those individuals who may already be pregnant. Greatest emphasis must be placed upon reproductive counseling and proper timing of "desired" pregnancies in relation to medical and emotional health and the motivation of prospective parents.

Timing is an acute problem, since insults to the in utero environment must be detected and eliminated or controlled before irreversible damage has occurred. The perinatal outcome may hang in the balance, depending upon the timeliness of referral

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and/or registration of the patient in a suitable obstetric facility.

A careful obstetric, medical, and family history; a thorough physical examination, and appropriate laboratory tests, all at the first antenatal visit, give much of the information necessary to identify most high risk pregnancies.

Sometimes Difficult

The diagnosis of an intrauterine pregnancy is not always easy. Factors that should be considered in this diagnosis include the menstrual history. The last menstrual period may not be easy to recollect for a woman who has had perhaps 15 or 20 years of monthly menstrual periods.

Frequently it is of help to attempt to identify with the patient the time of the year or some other important date in her life with the onset of her last menstrual period. Also, very frequently, we fail completely to ask the patient if she feels that she is pregnant; which seems to be a rather pertinant question. Many pregnancy tests are available, some with only marginal value and some with extreme accuracy such as the Beta Subunit Radioimmunoassay which, unfortunately, is not yet universally available.

Sonography may also, in the hands of the expert, pick up a pregnancy that is as early as five weeks following conception. The diagnosis of pregnancy may, of course, also be confirmed by pelvic examination, but this is often difficult in the early pregnancy and in the obese patient. However, it is worth spending the necessary time to identify the onset of the pregnancy, as care of the high risk obstetric patient in the last trimester may hinge on the duration of the pregnancy to that time.

At Both Extremes

Women at the extremes of the reproductive age-group have increased risks of a number of obstetric complications. For example, the adolescent pregnant girl, of whom we spoke earlier, has a higher incidence of toxemia, abnormal labor, premature infants, and nutritional problems.

The pregnant patient at the other end of the reproductive age-group also has statistically increased obstetrical complications. It has recently been shown that the perinatal morbidity and mortality begins to rise at the mother's age of 30, and any pregnant patient over the age of 40 has the additional risk of chromosomal abnormalities, particularly mongolism.

One of the more important of the risk variables in obstetrics is the poor past obstetric history. Many major obstetric complications are repetitive. A patient who has lost a previous pregnancy has a great need for careful evaluation and management.

A woman who has had a stillbirth, a fetal death, or a neonatal death, is at increased risk for this to recur in subsequent pregnancies. Careful monitoring of the fetal and placental status, the antepartum fetal status, and intrapartum and neonatal intensive pediatric care may be of help to these patients.

Women who deliver a low birthweight infant tend to have subsequent small babies. 75% of neonatal deaths occur in low birthweight infants, and those that survive their early days have a two-fold increase in the incidence of cerebral palsy and mental retardation. Intensive pediatric care can help prevent undesirable sequela in these small-for-dates and premature infants. Third trimester bleeding, such as due to placenta previa, abruptio placenta, and postpartum hemorrhage, also tend to be repetitive. To anticipate these problems is to diminish their threat.

Importance Of Medical History

The medical history is extremely important in the identification of high risk patients. Renovascular problems, such as hypertension, recurrent or chronic urinary tract infection, renal insufficiency, or collagen diseases, may cause many difficulties. These entities do predispose the mother to pregnancy-induced hypertension. They also predispose to cerebral vascular accidents, or exacerbation of her chronic problem, while the fetus is at risk of dying or becoming mentally retarded from prematurity, dysmaturity, or chronic utero-placental insufficiency.

The chronic hypertensive pregnant patient is a "time bomb" and requires skillful defusing. Major endocrine disorders, such as diabetes mellitus and thyroid abnormalities, markedly increase fetal risk. This is true also of gestational diabetes. The fetus of the insulin-requiring diabetic mother is in a perilous environment. Frequent periodic monitoring of the maternal status and of the fetal environment, combined in the poorly controlled diabetic patient with preterm delivery once fetal maturity is assured, may save the baby. Obstetrical, medical, and pediatric consultation is crucial in the management of the pregnant diabetic and of her newborn.

The patient with congenital or rheumatic heart disease can also become a major medical and obstetric problem, especially during the last weeks of pregnancy and during the puerperium. Major complications may be circumvented by obtaining a thorough cardiac evaluation early in pregnancy and to develop a plan of management based on that evaluation. A pregnant cardiac patient may experience her first heart failure during her pregnancy, and in her case, the greatest risk is at 32 weeks, and again, also in the immediate postpartum period.

Rh isoimmunization has, in the past, been a

killer of fetus and newborn, and has been responsible for major neonatal morbidity. Any pregnant patient who has had a previously affected fetus from an Rh isoimmunization, or is carrying a first-affected fetus, is at great risk. Rh isoimmunization can be prevented in the majority of Rh negative patients who deliver Rh positive babies through the use of postpartum injection of anti-D immunoglobulin. It must also be remembered that mothers who have spontaneous or therapeutic abortions early in pregnancy are at risk for being immunized, and all such patients who are Rh negative should also receive the anti-D immunoglobulin, though the amount they require need not be as great as the mother who delivers a term pregnancy.

Nutrition During Pregnancy

It would be difficult to overemphasize the importance of nutrition during pregnancy, but it has been my experience that nurtirion is one of the areas of medical care in which many physicians are poorly informed. It also hardly needs to be pointed out that in our area of this country, particularly with our less-advantaged patients, nutrition for the most part is in a sorry state.

It should be emphasized to all obstetric patients that an adequate intake of iron and protein is of extreme importance, not only for their own well-being but also for the health of the developing fetus. For the most part, protein is expensive, and it is here that the skill of the physician and nurse are of greatest value in helping develop a diet for the particular patient which is both valuable and financially possible.

As has been stated previously, high risk obstetric problems are frequently repetitive, and a prime example is in the patient who had a previous fetal malpresentation. Previous cesarean section can also pose a significant fetal risk from prematurity. A major cause of prematurity in a patient undergoing a repeat cesarean section is iatrogenic from improperly timed repeat cesarean section.

Clinical documentation of the fetal age, beginning with an accurate history of the last menstrual period, as well as such laboratory studies as the L/S ratio, amniotic fluid creatinine, ultrasound, and possibly x-ray, should eliminate this particular fetal risk.

The incompetent internal cervical os is associated frequently with loss of pregnancy in the 14 to 20 week gestational period, and may be suspected in the patient who has had several previous pregnancy losses during this period of time. Uterine fibromyomata may interfere with the patient's ability to become pregnancy, or to carry her pregnancy during the first few weeks, and if located low in the pelvis, may interfere with vaginal delivery.

A Thorough Physical

Obviously, a thorough physical examination is an integral part of the obstetric workup. A pelvic examination is an extremely important part of this physical examination. Although, fortunately, the absolutely contracted pelvis is becoming quite infrequent, the detection at the first examination of a small pelvis will have major impact on the manner of delivery of this patient at term.

An emotional survey of all patients is an important part of the initial workup and no less so during pregnancy. It is important that the fears, attitudes, biases, hostilities, etc., are all evaluated, not only with reference to the patient's general health, but more in particular with relation to the present or anticipated pregnancy.

It is necessary to have some understanding of the relative importance of a variety of risk variables that we have enumerated. Probably, the three most significant with regard to predicting infant morbidity and mortality are: (1) the poor obstetric history; (2) the history of medical and nutritional disease; and (3) of generative tract disorders.

Time For Amniocentesis

It must be pointed out, however, that there may be poor pregnancy outcome in patients who exhibit low or no risk during the pregnancy. These are usually the result of problems that arise during labor and delivery, and occasionally those that arise as the result of congenital and familial genetic defects.

If you have a patient who has a child with an inborn error of metabolism or chromosomal abnormality, or a familial history of metabolic disorders, or if the patient is over 40, she should be considered for diagnostic amniocentesis between 14 and 16 weeks of gestation. Through the use of amniocentesis, cell culturing, and karyotyping, we are now able to identify many of those fetuses with hereditary disorders.

Amniocentesis is done at this particular time in order to obtain cells for culture and allow sufficient time to obtain the results, so that the patient, with proper counseling, can make an informed choice concerning whether she wishes to terminate the pregnancy which is at risk.

There are also a variety of social and economic factors which may lead to increased fetal and maternal risk, such as poverty, malnutrition, crowding, and poor hygiene. All of these have been shown to have a serious effect on pregnancy outcome.

There are a variety of biophysical determinants of the outcome of pregnancy. This includes, among

other things, examination of the bony pelvis for its size and shape. If the pregnancy continues to term, the size of the bony pelvis, as well as any abnormalities of the soft tissues of the pelvis, may be directly related to fetal loss. In addition to the original determination of the size of the uterus, it is important continually, throughout the pregnancy, to evaluate the uterine growth. This is very simply done by measuring the height of the fundus above the symphysis pubis.

Obviously, uterine growth may be both greater than average or less than average, and either should alert the physician to the possibility of multiple pregnancies, polyhydramnios, central nervous system congenital anomalies, as well as the possibility of intrauterine growth retardation when the uterus does not grow according to schedule.

Laboratory Evaluation

An adequate laboratory profile on the new obstetric patient will, of course, depend on her medical or obstetrical problems. However, the minimum laboratory evaluation should include: Urinalysis, including a screening urine culture; a complete blood count; blood group and Rh determinations (all patients with positive antibody screen need to have the antibody identified, as even atypical antibodies may cause erythroblastosis); serology; sickle cell preparation on all black patients; cervical Pap smear (as many as 1% of pregnant patients may have an abnormal Pap smear, and early detection can result in no delay in appropriate therapy); a tuberculosis skin test should also be performed; a two-hour post-prandial blood sugar should be done on all patients who are at risk for gestational diabetes, which should include all those with a previous pregnancy loss, fetus over 9 pounds, toxemia of pregnancy, patients who have delivered previous infants with congenital anomalies, patients with repeated glycosuria, and on those patients with a family history of diabetes.

Special Tests

In addition to the routine examinations, there are a variety of special tests which have proven of value. Included is the electrocardiogram in the elderly gravida. Ultrasonography is valuable in identifying the fetus and its position, as well as the position of the placenta. Fetal size and age can be estimated from the measurement of the biparietal diameter of the fetus and of its transthoracic diameter.

Serial sonograms, particularly in the fetal ages of 20 to 30 weeks, will very accurately identify intrauterine growth retardation. Occasionally, fetal abnormalities may also be picked up on the sonogram. Amniocentesis, as mentioned previously, may be used to determine the L/S ratio as a means of identifying fetal lung maturity. Early in the pregnancy, particularly in the fetal age distribution of approximately 14 to 20 weeks, the presence of a large amount of alphs-feta protein in the amniotic fluid will help to identify those patients with open central nervous congenital anomalies, such as anencephaly and meningomyelocele.

The presence of bilirubin in the amniotic fluid of the Rh sensitized pregnancy may indicate a need for early pregnancy termination. There are a variety of other tests used to determine the fetal status, such as the level of estrogen in the mother's 24 hours urine excretion or in her serum, and whether this level is rising or falling during the pregnancy, which will help to determine the status of placental function. Fetal stress testing, such as the oxytocin challenge test, will help to identify the placenta through which oxygen transport is not functioning well. Non-stress testing is presently being evaluated for determination of fetal well-being. During labor and delivery, electronic fetal monitoring and fetal blood sampling are extensively used to detect current fetal status.

Summary

Perinatal outcome provides a mirror which reflects generally the overall health standard and the quality of female health supervision beginning at an early age. Obstetric concerns are interwoven with most of the ills of society and it is clear that perinatal events cannot be viewed as if they occur within a social vacuum.

Poor reproduction tends to occur within vulnerable minority groups and usually their losses are repetitive because underlying causes are persistent and recurrent. Lying at the heart of what is most needed is the ability to identify and offer special attention at the earliest possible moment to pregnant women who fall into this category.

Remarkably, or possibly not so remarkably, an accurate, well-taken history and thorough physical examination constitute a reliable means of estimating degrees of relative risks.

In addition, rapid technological advances of the past decade have provided a variety of tests for estimating viability within the fetal-placental unit and the relative status of fetal maturity and welfare. The predictive capability of these tests vary considerably but, singly or in aggregate, when used intelligently, may provide a scientific basis for management. Nevertheless, few actually achieve reliability within the 95% confidence limits. None is intended to be a substitute for sound clinical judgment and physician experience.

Many of the major factors which bear upon perinatal results have been identified. Indeed, several indices computing an overall vulnerability

risk potential, based on these earily recognized demographic variables and pathologic conditions, have proved to be remarkably accurate in predicting outcome.

On the other hand, approximately 25% of newborn infants with some significant morbidity are delivered of mothers who have not been appreciated as being at risk. Congenital, familial, and genetic defects ran high among such women. This fact calls for greater screening efforts with respect both to reproductive counseling and genetic screening before pregnancy, and a search for chromosomal aberrations and inborn errors of metabolism during pregnanccy. It is clear, however, that up to 2/3 of all gravidas who ultimately are discovered to be at risk are thus detected during the course of pregnancy as a consequence of proper surveillance.

The state of pregnancy itself imposes certain stresses upon the system which may aggravate a pre-existing or latent condition, or create some physiologic disturbance capable of causing significant fetal jeopardy. These women who evidence their vulnerability late must not be neglected in our haste to offer special care to the obviously ill group. While focusing upon the vulnerable, we must likewise maintain an excellent record among low-risk patients.

The concept of fetal-perinatal care does not mean merely patient dislocation and a one-way flow of mothers and newborn infants into large centers. It has a much fuller meaning and it requires more involvement, rather than less, for all those concerned with perinatal health.

Local communities must be deeply involved in the broader, often more decisive matters of health; those of general health maintenance, lay education, patient screening, diagnosis, rehabilitation, continuity of care, and providing support for local programs. Provisions for alternatives to the specialists in obstetric health maintenance are, likewise, local obligations, while the response to this need within our educational institutions tends to promote the development of programs for wider career choices in the maternal-child health field.

In many ways, these are the larger commitments in perinatal health programming, and are most likely to be rewarding and productive over the long haul. Improvements in the general standards of living, assurance of optimal nutrition, adequate housing and sanitation, provisions for education, rest, and contentment from a sense of well-being, all of which are known to have a bearing on the quality of reproduction, call for every public sector to involve itself in obstetric affairs and to establish equitable opportunities for safe, fruitful, childbearing as a national priority. □

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clinical understanding of common disorders.

The techniques utilized are many; but principally, they center on placing each patient in the context of an ongoing process of disturbed hemostasis and considering each process as a result of combinations of nature (genetics) and nurture (environment plus commulative past experiences).

In this sense, in the genetic approach, the labels "acquired" or "genetic" are irrelevant since in most instances, disease, as a dynamic process, reflects both. Another attitude fostered by the genetic approach is to refine diagnoses through the study of family members. The genetic approach when merged with epidemiologic principles excels in defining populations at risk, can suggest modes for early detection, predict the course of disease, and offers avenues for prevention and treatment.

The study of patients within their familial context affords a clinician the opportunity to fruitfully resolve concerns about recurrence of the disorder in other relatives. Whether we label such involvement with the family as genetic "counseling" is immaterial, but, without a doubt, the clinician who has fulfilled the needs of his patient's family will be infinitely more effective in terms of prevention.

The Formative Years

The genetic approach is best instituted in the early formative years of future colleagues as part of their general clinical education.

Within the University Medical Center, our clinical activities are intimately linked with those of the clinical departments—particularly, Pediatrics, Obstetrics, and Family Medicine. We also recognize that our responsibilities extend to colleagues in practice. Referred private patients are studied within our department on an individual basis.

We consider the best clinical geneticist to be the clinician in whom the family has already invested its trust. To uphold this, we attempt whenever possible to assess patients in their regional hospital facilities and encourage follow-up by their physician.

In addition to Mobile, we hold clinics in Pensacola and through coordination with our Family Practice Department, are able to regularly visit hospitals located in Brewton, Monroeville, Troy, and Demopolis. Presently, we are in the process of developing another medical clinic to be located in a medical facility in Southern Alabama.

The genetic approach is time-consuming. The collection of family medical records, pedigree, physical examination of patients and selected relatives, explanation of mechanisms of disease and modes of inheritance, recurrence risk, etc., are all equally essential.

Many clinicians are hesitant or unable to invest the time required for this purpose. Their questions concerning "relevance" are particularly relevant in view of the fact that financial reimbursements for such time are minimal, if any. A partial solution to this problem may lie in the training of qualified genetic associates who are competent in family pedigree and medical history gathering, specialized physical examinations and preliminary genetic counseling.

We have trained our Genetic Associate, who is also a Pediatric Nurse Practitioner. This associate is available to any community or private medical group (particularly those engaged in Pediatrics, Obstetrics, or Family Medicine) to render assistance with patient evaluations.

Number Increasing

The training of additional nurses to become Genetic Associates will be particularly relevant to those colleagues engaged in Obstetrics. The number of couples seeking the antenatal detection of fetal defects is rapidly increasing. In the last few months of 1977 we have interviewed a larger number of couples than during the entire previous year.

It must be remembered that an estimated $400,000,000 is spent annually for the care of children suffering from Down's syndrome and that 50% of these were born to mothers of advanced age. It is only a matter of time before the government will "subsidize" as well as "influence" the use of antenatal studies.

In our state, 2,500 babies are born annually to mothers older than 35 years. Antenatal studies in our opinion are not just "one more test." Couples requesting such studies face profound human concerns and we must insure that a thorough interpretation of clinical data is done and proper understanding is reached by the parents before such studies begin.

We are also concerned that the normal fetus may have no advocate when wedged between the parental anxiety concerning birth defects and the laboratory's incentive to deliver a "normal product." We fear healthy fetuses will be sacrificed by guidelines primarily concerned to prevent "abnormal products." Clinical medicine is a one-to-one transaction and it is unsettling to foresee the emergence of "conveyer type" antenatal diagnostic "operations" with the usual coterie of "concerned" functionaries.

The verdict concerning the continuance of fetal life should not come from anonymous laboratory hands who may over-interpret or be so remote as to not properly convey or prevent what may be lethal laboratory misinterpretations. Antenatal diagnosis should remain decentralized, and in the contect of an intimate relationship of trust and unhurriedness between a clinician and his patient. And yet, we understand that one of this nation's major bankrupt cities is already gestating a massive project to "centralize" antenatal studies for thousands of women.

Coming Generations

We hope that our efforts will help to introduce the genetic approach to primary health care delivery in our region and with it a concern for upcoming generations. Medicine cannot withdraw from areas that are its legitimate concern, even if unprofitable, without accepting the inevitable appearance of unwelcome invaders who, even if well-motiated, can lead us to eugenics which would be better avoided. □

REFERENCE

1. B. Childs (1977) Am. J. Hum. Genet. 29, 1.

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74th Congress on Continuing Medical Education

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By GEORGE D. OETTING, Ed.D., Director of Education

Over 700 stalwart CME officials braved the endless Chicago snowstorms to attend this three-day gathering. (Anyone who schedules a February meeting in Chicago should be eternally banned to Siberia to teach CME to the MDs who take care of the salt miners!)

Among the courageous attenders were MASA members Martin Putnoi, M.D., C. Neal Canup, M.D., John M. Packard, M.D., E. David Haigler, Jr., M.D., and President-elect Hiliary H. Henderson, M.D.

There were interesting programs presented on a variety of subjects, but I would like to report on four subject areas which emerged as major topics at the Congress.

Loss Of Leadership In Health Care

Both keynote speakers expressed grave concern about the declining influence that physicians have in the major decisions affecting health care within the United States. Using a title of a Book, "Doing Better and Feeling Worse," Christopher C. Fordham, M.D., Dean of the School of Medicine, University of North Carolina, first outlined some of the recent improvements in health care. He cited the increase in the production of health care professionals, the increased access to health care, the decline in the overall mortality rate, and better institutional response to public need.

Among the low-income groups, he noted, they have an average of six visits per year to medical facilities, which is actually higher than the national average of five per year. However, referring to the, "Feeling worse," aspect, he was very much concerned about the numerous government regulations which hamper the practice of medicine, and also the lack of credibility that medical educators have with politicians; physicians do not have the clout that others have in influencing the development of health care policies.

Charles C. Edwards, M.D., a former Secretary of Health, presented some interesting reflections on the ways MDs have lost control of medical education. Today, he maintains, HEW, the Bureau of the Budget and Congress are really controlling medical education and are using it for social engineering purposes.

This has happened, he feels, over a period of time as the government poured more and more money into medical research, and the development of medical schools. As a result, medical educators became more and more dependent on federal funds for the operation of the educational facilities.

Additionally, as more federal support came in, more federal controls were also imposed on how the money would be spent, and, therefore, on how the future direction of medical education would be charted.

"We must," he said, "reject the role of handmaiden to social planners and bureaucrats."

Commenting on the current situation in HEW, Dr. Edwards feels that, "It has outlived its usefulness." The Secretary of HEW is ignoring health professionals in making his decisions and the Secretary of Health (the top MD position) has been relegated to a second-level position. What's needed, he maintains, is a new cabinet-level Secretary of Health position reporting directly to the President on health matters; the United States is the only major nation not having a health professional directing this program. It's "time to get off the sidelines and work with, not for, the bureaucrats."

Is CME Being Taught Properly

Several presentations raised interesting questions as to whether the proper educational methodologies were being used in presenting CME to practicing physicians.

Is the traditional classroom format, with illustrated slide lectures, the most effective way to teach physicians CME? Is this format primarily used because this is the way physicians were taught themselves at their undergraduate level of education?

A California physician, Phil R. Manning, felt that, "CME must be related to real events and office practices — not the passive passage of information in a classroom."

Medical students, he maintains, need to be taught how to learn themselves when they are out in practice — something not stressed enough in medical schools. He suggests a review of a physician's own charts and information could be used to identify his personal CME needs, and then a personal CME development program could best be developed. Rather than filing patient charts alphabetically, he feels it would be more useful to file them by (1) clear cases; (2) doubtful cases; and (3) mistakes!

CME should supply help at the time the physician needs it in his own practice, and should relate to real events. Accreditation procedures, paperwork, requirements, etc., should not be allowed to bog down this major purpose in CME.

The Impaired Physician

One major afternoon session was devoted to the examination of the problems of physicians who are impaired in their professional competence by such as drugs, alcohol, mental illness, or senility. AMA estimates that 7-10% of all MDs have problems of this kind.

Two national conferences have been held on the subject already, and another one is scheduled for next fall. Thirty state medical societies now have some sort of program to help impaired physicians. (Under the leadership of MASA President John B. Rice, Jr., M.D., an impaired physician workshop was held in Montgomery on Feb. 22.

J. Pat Tokarz, M.D., Pennsylvania, related that there has been a recent attitude change. This change acknowledges that physicians have the right to treatment the same as anyone else, that treatment, rather than punishment, should be the major goal. Early identification of the problem and prompt treatment are the most effective ways, he suggests, to alleviate this problem.

Reflecting on the effect of an impaired physician in a hospital, Colin

McGuill, M.D., warns that it will be a very tough and soul-searching experience to confront impaired physicians with their problems. Fear and compassion may tempt MDs to ignore the problems, particularly when the impaired physician is a highly respected staff member who may be getting old and "losing his touch."

However, he reminded the group, quality medical care in the hospital is the prime concern, and they all have a responsibility to maintain this quality – this is the price of staff privileges. One of the major problems in confronting an impaired physician is the threat of legal action, such as a slander suit.

It's important that all states have some immunity laws to protect individuals as they are conscientiously trying to assist the impaired physician.

The Foreign Medical School Graduate

The final Sunday morning session (which was attended by an amazingly large number of stalwarts) focused on recent legislative and testing developments at the national level, which have major implications for FMGs in the future.

Edithe J. Levit, M.D., President of the National Board of Medical Examiners, reported on a new examination which will be taken by many FMGs in the future.

Congress, while passing recent legislation to restrict the future flow of FMGs, failed to consult the National Board of Medical Examiners when it required that FMGs must pass an exam equivalent to Part I and Part II of the National Boards.

Unfortunately, the exam taken by most FMGs in the past (the ECFMG) was found not to be equivalent. Consequently, the National Board of Medical Examiners had to create a new exam to meet this equivalency requirement, called the Visa Qualifying Exam (VQE).

This instrument was created out of questions used in National Boards Exams. It is a two-day exam with the first day on basic science (500 test questions), and the second day on clinical sciences (450 items).

The first administration of this exam took place in February 1977, and the results indicate a pretty tough standard: 4,611 took the exam, and 1,163 passed – a passing rate of approximately 25% with many failures in the basic science portion.

Dr. Levit feels that the use of the VQE should help to insure that FMGs will meet the same testing standards as American students, who must pass the National Board Exams.

Russell Samson, M.D., himself a FMG from South Africa, expressed deep concern about the many obstacles being placed in the path of FMGs who desire to practice medicine within the United States. They are required, he relates, to take many exams after they have actually been in a specialty for a number of years and quite often have forgotten the detailed basic science information they must know to pass these exams. The new laws which will restrict most FMGs to 2-3 years in the states and will also prevent most FMGs from completing residencies.

Bernard Weinstein, Director of Bellevue Hospital Center, expressed the concern of many hospital administrators on the future depletion of FMGs to fill staff positions, particularly in the big city hospitals in the Midwest and the East Coast.

For example, in the cities of New York, Cleveland, Baltimore, and Detroit, approximately 50% of the hospital staff are FMGs.

Hospitals that have developed a high reliability on FMGs to fill staff positions will face serious problems in the future, and also may face the possibility of a loss of residency training slots. Dr. Weinstein maintains that the stereotype of the FMG being somewhat less in quality than other MDs has not been proven.

Most studies he has reviewed show there is no difference in professional competence between U.S. students and FMGs. It may be, he feels, a difference in their ability as test takers, but this has nothing to do with their performance as physicians.

Jose M. Ferrer, M.D., Associate Dean at Columbia, continued the discussion of the impact that reduced FMGs will have on medicine. Traditionally, he related, the FMG tends to gravitate to the specialties and locations that are not wanted by American physicians. So the question to be answered is: Who will replace the FMGs in the health care system?

Dr. Ferrer feels that a number of different resources may combine to help alleviate the problem. These include a greater number of students graduating from U.S. medical schools. (Enrollment has doubled from 1960-1977.) U.S. citizen FMGs will be coming back to the United States to, hopefully, begin practice. More use will be made of nurse practitioners, midwives and physician assistants, and more PhDs will be used in laboratories and research positions previously filled by MDs.

All in all, it was very worthwhile Congress, in which a considerable amount of information concerning recent developments was presented. Now, if they move the Congress to Miami, I would be completely happy!

THE PHYSICAL SUFFERING OF CHRIST

CONTINUED FROM PAGE 10

appreciate the suffering of Christ, vividly betraying man's evil toward man and toward God.

This could very easily leave us in a state of depression if we did not know the remainder of the story. The joy and miracle of the Resurrection and Easter is the beginning and tends to help us understand the physical suffering of Christ. □

REFERENCES

1. The Holy Bible – The Gospels (Mathew, Mark, Luke and John)
2. A Doctor At Calvary—Pierre Barbet, M.D.
3. The Crown And The Cross—Frank Slaughter, M.D.
4. Daily Bible Study, Luke—William Barkley.
5. The Sacred Shroud—Thomas Humber.

DIGEST—STATE COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health, at its meeting on Feb. 15, 1978, took the following actions:

- Confirmed a Deputy Registrar for Vital Statistics for Randolph County.
- Approved the summary of the Statewide Family Planning Project Continuation Grant for FY1979.
- Was advised of the closure of the oyster beds in Mobile Bay at 6 a.m., Feb. 1, 1978.
- Was advised of a legal order against the Aldridge Water Works effective January 31, 1978, and the Dixie Trailer Court effective February 2, 1978.
- Was advised regarding suits filed contesting the divorce certificate and birth certificate.
- Received information regarding proposed National Guidelines for Health Planning with the comment period ending Feb. 21, 1978 calling for a bed/patient ratio of 3.7 per 1,000 as a goal.
- Approved initial issuance of Assurance of Need for seven facilities.
- Approved a project for Providence Hospital, Mobile, to add 15 dialysis units to the ESRD Facility and denied an application for a free-standing ESRD facility containing 10 dialysis stations for Biomedical of Mobile.
- Approved with favorable findings and recommendations an amended application for Medical Center Hospital, Huntsville, deleting 35 long-term care beds and adding 21 general hospital beds and acillary services.
- Denied, with adverse findings and recommendations, an application for a 57-bed facility known as Springhill Nursing Home, Florence, Alabama, a project no consistent with the 1977 Medical Facilities Plan.
- Declined a request to make juvenile diabetes a notifiable disease and requested additional information.
- Received a commendation from United Narcotics Detail Operation in Birmingham for Board action placing the drug Cyclohexamine on the Alabama Uniform Controlled Substances list in Schedule I at the January meeting.
- Received a progress report on the status of Influenza in Alabama indicating a variety of viruses including Adenovirus and Influenza A and B scattered throughout the state.
- Received a report on progress in the immunization program indicating 66% of the two-year-olds fully protected against the childhood diseases compared with the 1976 level of 65.5%. The school entrance immunization survey for 1977 indicates 96.2% immunization level compared with 93.78% in 1976, a note of considerable progress.
- Received advice of the satisfactory completion of the annual review of Alabama as an Agreement Stat of the U.S. Nuclear Regulatory Commission for radiation protection as "adequate to protect the public health and safety" noting that this is a commendable report for the State Health Department's radiation protection activities.

Psychiatry and Alcoholism

By BRENDA M. CALHOON, Ph.D., Fairview Medical Center

Historically St. Jude Hospital/Fairview Medical Center has opened it's doors to the alcoholic. Several years ago treatment of alcoholism was totally separated from psychiatry, operating at various times within an AA, medical model, drying out framework.

Recently, the Psychiatric Department, rather hesitantly and reluctantly, assumed the care and treatment of alcoholic patients. Accosted by defenders of AA, Alcohol Counselors (some of whom believe you must be one to treat one) and psychiatric staff that wanted no truck with drunks, psychiatry stumbled forward. Our approach evolved from all our failures, and a combination of every treatment technique in vogue.

Currently, psychiatry at Fairview Medical Center treats alcoholism in two stages, (1) Detoxification and (2) Rehabilitation. Detox is, we believe, a medical crisis impending situation and should be treated medically. While the orientation is toward preparing the patient for rehab, medical attention is available and withdrawal symptoms are treated with chemotherapy for approximately five days.

We attempt to keep patients as comfortable as possible, prevent severe withdrawal symptoms with daily decreasing administration of Dilantin and Valium. Liver profiles, EKGs, chest x-rays, and vitamins are part of the detoxification procedure. It is not our intention to create "pill abusers" from alcohol abusers.

Following detox, the second stage, Rehabilitation, is initiated. Patients are placed on an open unit with other patients of various diagnostic categories for group, individual and activity therapy. A full day of scheduled activities is planned to fit individual needs with appropriate recreational, rest and therapy periods. Patients are encouraged to attend AA meetings within the city while hospitalized.

While we hold no idealistic beliefs about our treatment methods, which are founded in reality therapy, we hope to avoid the isolating of alcoholics and the special emphasis placed on "their drinking problem" rather than themselves as first a person.

Our therapy program encourages alcoholics to stop viewing themselves as a "special case," "special problem." This, we believe, directs attention away from self understanding and concentrates on the alcohol aspects of the personality entirely. While our techniques are removed from an analytical foundation, we do emphasize understanding of defense mechanisms and long standing guilt feelings that perpertrate a need for escape "to the bottle again."

Using Rational Behavior Therapy as a basic tool, we emphasize self responsibility for behavior and avoid the "poor me, I can't help it" syndrome. Psychodrama allows the patient to "role-play" situations that are upsetting and depressing, which create a constant need for relief, "the bottle."

Although patients at times do return to their abuse patterns, we maintain our efforts to leave the responsibility for change with the patient and avoid "staff failure" symptoms and rationalizing. Our community resources involve AA, Mental Health Center, Counselors, Pastors and ex-patient volunteers.

Offering treatment to alcoholics has added a dimension to our total care system, staff awareness to the general alcohol problem and an understanding of the need within our community that we had not dealt with. □



After specializing in the treatment of alcoholism and drug addiction for 17 years, we found . . .

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PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board eligible 1978; National Board; Available July 1, 1978. LW-004.

GASTROENTEROLOGY/INTERNAL Medicine: Age 29; Medical College of Georgia, 1973; National Board certified, American Board certified and passed Flex Examination; seeking partnership, multi-specialty group, single specialty group, Institutionally based or research. Available July 1978. LW-06624.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; Presently in the army completing a two year obligation, (wife is also a Board eligible Internist and is presently completing an infectious disease fellowship.) Wish to join a small group in general internal medicine preferably a small city with rural surroundings. Available August 1978. LW-018. (See LW-019.)

INTERNAL MEDICINE/RHEUMATOLOGY; Age 31; Ohio State University, 1972; American Board certified; American Board eligible; seeking single specialty group, institutional based or multi-specialty group. Available July 1978. LW-09159.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 30; University of Louisville 1973; seeking clinical practice. Available July 1978. LW-007.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; seeking practice in general internal medicine with a small group, preferably a small city rural surroundings. Available July 1978. LW-019. (See LW-018.)

SOPHOMORE medical student—age 22, interested in a town or hospital assisting with medical school costs in return for service there in general/family practice. Available 1980. LW-01.

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; University of Virginia, 1973; National Board Certified; American Board Certified; will be American Board Eligible 1978; seeking single specialty group or partnership. Available July 1978. LW-08695.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; LSU School of Medicine, 1971; American Board Certified; will be American Board Eligible 1978; seeking single specialty group, multi-specialty or partnership. Available July 1978. LW-10561.

GENERAL PRACTICE EMERGENCY ROOM: Age 26; Creighton University, 1976; seeking practice in the Birmingham area or within a 20-mile radius. Available July 1978. LW-100.

OPHTHALMOLOGY: Age 33; University of Alabama, 1971; American Board Certified; seeking private, partnership or group, industrial or institutional preferably in the Mobile area with a population of 25,000 or more. Available July 1978. LW-200.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PEDIATRICS: Age 27; University of Texas Southwestern, 1975; National Board Certified; seeking partnership, single specialty group or solo. Available July 1978. LW-10873.

RHEUMATOLOGY/INTERNAL MEDICINE: Age 30; Baylor College of Medicine, 1973; American Board Certified; Will be American Board Eligible 1978; seeking multi-specialty group, single specialty group or solo. Available August 1978. LW-10557.

SURGERY/EMERGENCY MEDICINE: Age 46; University of Tennessee, 1955; American Board Certified; seeking partnership, solo or multi-specialty group. Available June 1978. LW-10649.

PHYSICIANS WANTED (Opportunities for Practice)

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and larger cities contains a progressive 74 bed hospital. Ample opporltunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17.

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital provileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

GENERAL PRACTITIONER'S 2 family physicians wanted for general practice in a 64-bed hospital, located between 2 North Alabama towns (in the heart of the Tennessee Valley) with a trade population of 18,000. Office space available. Within 35 miles of large city. Large amount of industrial work in our area. PW-5.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 4500 population. Within 17 miles north of Montgomery, Alabama. The finest recreational areas in Alabama consisting of 2 large lakes. Newly expanded 69 bed hospital with 8 active staff members. Invitation to visit with expenses paid will be directed to those qualified. PW-9.

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER Wanted—Town of 6,000 population trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities include golf course, country clubs, tennis courts. PW-7.

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Exceilent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PRACTICE OPPORTUNITIES for family practitioners, general surgeon, OB-GYN, orthopedic surgeon in progressive community of 10,000 with service area of 40,000, in Northwest Alabama with good schools, housing and recreation. Attractive relocation and income guarantees. PW-25. →



Mrs. John Taylor
President

Plan now to make an informative and enjoyable trip to Twickenham.

Are we inviting you to England? No, Mrs. Everette Mosley, her convention committee, and I invite you to sojourn April 20 - 21st to the first city in Alabama to receive a city charter (1811), and the meeting place of the first state constitutional convention (1819).

Originally named by Leroy Pope, kinsman of Alexander Pope, Twickenham, in Northeastern Alabama, became Huntsville in honor of John Hunt, founder in 1805. One hundred years ago, Madison County Medical Society was formed. Not until mid-20th century did Huntsville become known as the rocket and guided missile research center.

The 55th A-MASA action-packed convention, shortened to accomodate busy schedules, but filled with the thrust and power of rockets from this great city needed to continually launch worthwhile efforts of our auxiliary, awaits you, with Hilton Inn as headquarters.

Just as the Apollo spacecraft consisted of three modules, command, service and lunar, so does our convention (stretching the meanings somewhat).

Our leaders and members with command responsibilities to guide local auxiliaries will get ideas for projects. They are invited to report on local auxiliary projects or ideas so that this service or services can be shared.

Last but not least, auxilians are urged to bring husband/wife for some lunar gazing under stars (fun) in Twickenham District, on the way to A-MASA and MASA activities, or at the Space Museum!

Mrs. Chester Young, AMA Auxiliary President, will join us as featured speaker at Thursday breakfast, to which physicians and wives are cordially invited. To celebrate Madison County Medical Society's Centennial, a "birthday" luncheon has been planned for Thursday. Our distinguished speaker will be Harold M. Voth, M.D., FACP, psychiatrist and psychoanalyst from The Menninger Foundation. His topic is "The Family and the Future of America."

Then, Friday, another first, a special luncheon honoring state and county past presidents will be hosted by Morgan-Lawrence county. Mrs. Bruce Martin, President, Southern Medical Auxiliary, will be our guest.

Officers to be installed by Mrs. John Chenault include: President, Mrs. Aubrey Terry, Russellville; President-elect, Mrs. Eugene Bradley, Centre; First Vice President, Mrs. Rufus Lee, Dothan,

Vice Presidents: Northeast District, Mrs. William B. Battles, Anniston; Northwest District, Mrs. Ralph R. Braud, Jr., Sheffield; Southeast District, Mrs. Lamar Miller, Dothan; Southwest District, Mrs. Leland Edmonds, Mobile; Recording Secretary, Mrs. Charles B. Howell, Decatur; Treasurer, Mrs. E. J. Dunn, Jr., Wetumpka.

All counties and members of the executive board have worked extremely hard this year to make it a record year in participation of national projects (AMA Immunization Campaign), state projects (Communication about legislation of comprehensive health education for Alabama students) and county projects (from benefits for local community needs—CPR, Scholarship, Shelter care, health careers — to international health's "Operation Outreach" and to AMA-ERF for medical education.

We have been a visible organization, cooperating with other groups. We promoted TV spots on immunization, painted hopscotches on school grounds, distributed the Health Education TV clip, "What In Health Do Your Schools Teach," and participated in health education awareness and action seminars.

Our full report of the many worthwhile statewide activities will be in Transactions report.

A unified, enthusiastic, ambitious, tenacious auxiliary and medical association with a good working relationship accomplished many things this year. It has been an honor to serve as AMASA's 50th President.

Up, up and away to Huntsville. See you there.

SURGERY: Age 31; University of Alabama, 1973; seeking specialty, assistant or associate practice in town of 25,000 plus population. Available July 1979. LW-400.

SURGERY: Age 34; Vanderbilt University, 1970; seeking practice in town of 10,000 - 200,000 population. Available September 1979. LW-401.

UROLOGY: Age 36; Tulane, 1966; American Board Certified; seeking assistant or associate practice preferably in the south coast area with a population of 100,000. Available November 1978. LW-500.

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MEDICAL OFFICE for lease in Tuscaloosa, with or without equipment. Building is 1½ years old, 1650 square feet, four examination rooms, large reception room; one unit of four-office complex; two medical offices, two dental offices. Fully equipped, if desired, for instant practice; equipment purchase optional. Ten blocks from Druid City Hospital. Separate equipment sale negotiable. Inventory available. Contact: Paul D. Nelson, D.M.D., 601-A Hargrove Road East, Tuscaloosa. Phone (205) 345-7134.

OFFICE SPACE FOR RENT: Mobile Medical Center, Inc., 1720 Springhill Avenue, Mobile, Alabama, has available office space for rent. There are also a limited number of condominium offices for sale. Phone Mr. Loftin, 433-2551 or Mrs. Nichols, 432-2407.

POSITIONS AVAILABLE

WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to $40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

VACANCY ANTICIPATED early 1978 for experienced board-certified Internist as Chief, Medical Service, and for Internist for position of Staff Physician of this 206 bed general medical and surgical Veterans Administration Hospital, Montgomery, Ala. The hospital has ICU, RCU, Pulmonary Function Lab, a good medical library, excellent facilities, and is affiliated thru regionalization with the Medical College of the University of Alabama. Salary commensurate with qualifications as determined by a Professional Standards Board, plus special VA Physicians bonus. Excellent fringe benefits include retirement, sick and annual leave, health and life insurance, as well as mal-practice coverage. U.S. Licensure (any state) required. English language proficiency is required in accordance with Public Law 95-201, Veterans Administration Physicians and Dentist Pay Comparability Act of 1977. Travel and moving expenses will be paid. The VA is an equal opportunity employer. Contact the Chief of Staff, VA Hospital, 215 Perry Hill Road, Montgomery, Ala. 36109. Telephone (205) 272-4670, ext. 202.

ATTENTION PHYSICIANS—The United States Air Force Medical Service has the following openings in Internal Medicine: Tyndall AFB, Florida; Robins AFB, Georgia; Eglin AFB, Florida (Cardio); Shar AFB, South Carolina; Andrews AFB, Maryland; In Radiology: Columbus AFB, Mississippi; Andrews AFB, Maryland; Maxwell AFB, Alabama; and In Orthopedic Surgery: Tyndall AFB, Florida. Other world wide assignments are available for all specialities. For qualified applicants the United States Air Force Medical Service offers a salary range from $33.000 to $45,000. Additional benefits include a thirty (30) day paid vacation annually, an excellent retirement program, plus numerous base privileges. Contact Capt. Bruce A. Geis, 3050 Presidential Drive, Suite 208, Atlanta, Georgia 30340, (404) 451-3888.

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NEEDED: waiting room furniture, business equipment, examining table, etc. Jefferson, Montgomery, Mobile, Huntsville county areas. Contact: 871-0505, Birmingham.

FOR SALE: Complete Three Examining Rooms plus one Minor Surgery room of office equipment. New July 1977. 205-566-0204. Thomas L. Wachtel, M.D., 211 Woodland Circle, Troy, Alabama.

WANTED—Office furniture, equipment for dermatology practice. W. C. Doss, M.D., 721 D. Ridgeway Road, Fairfield, Alabama 35064. Phone Office: 783-5330; Phone Home: 785-6730.

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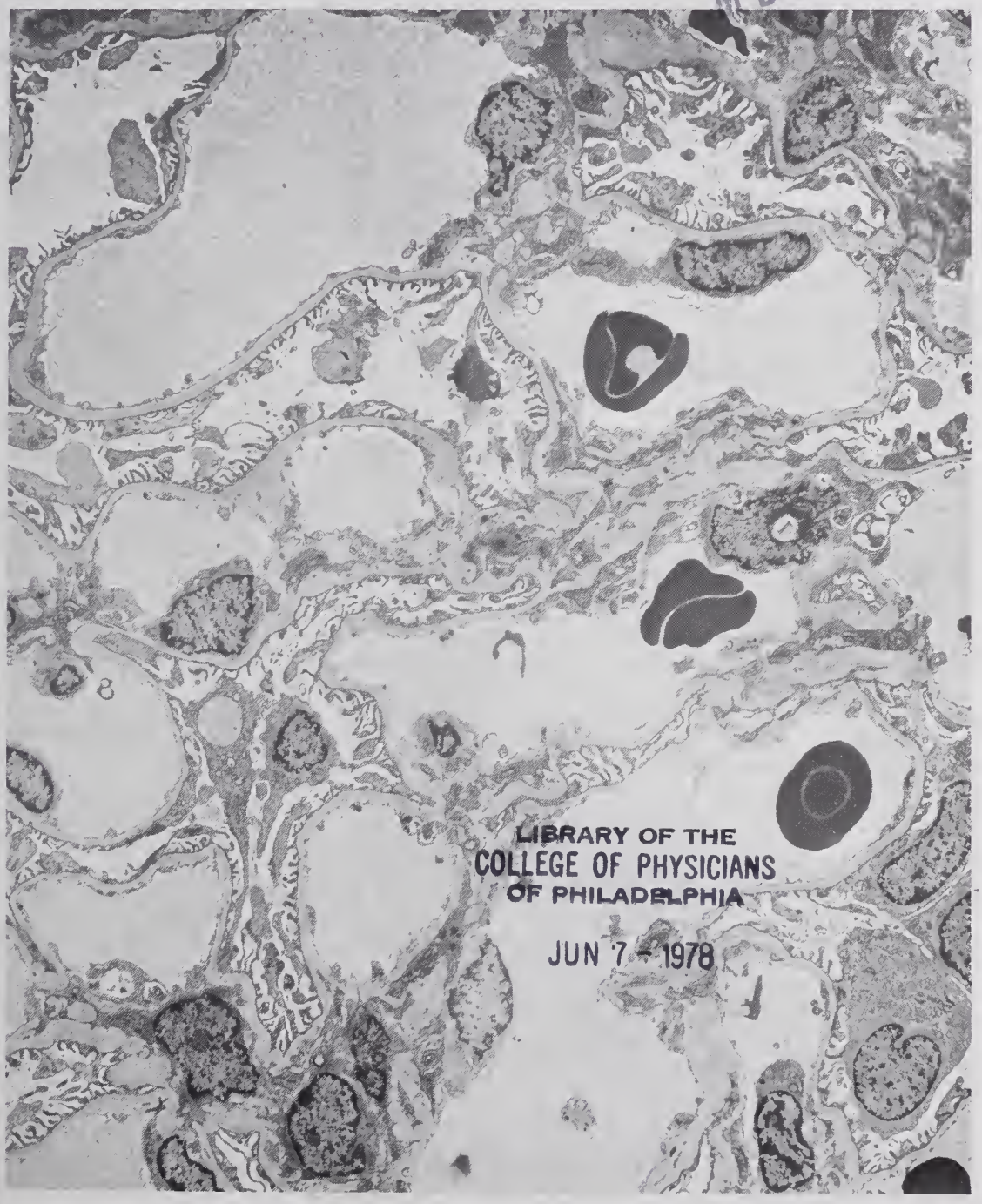
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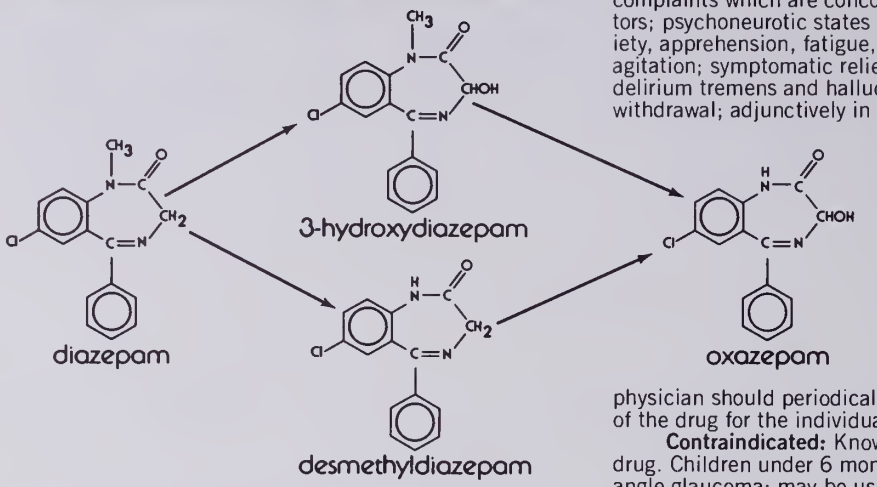
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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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JOURNAL

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ABOUT THE COVER

The electron microscope is no final answer in medicine and medical research. But it is a highly useful tool, most recently for the benefit of practicing physicians as well as in research. This x3,600 electron photomicrograph shows minute details in a normal kidney. Abnormal views are compared with it on page 9. The large dark masses are red blood cells. There are a dozen or more electron microscopes at UAB, used for service as well as research. Story, page 8. Courtesy UAB, Renal Biopsy Service.

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FROM THE EXECUTIVE DIRECTOR

As you may have noticed, the Journal has from time to time devoted an article to some research of note at UAB. Written by MASA's Bill McDonald, they are not, of course, scientific articles. He's a journalist, not a scientist.

What they are and all they pretend to be are journalistic accounts of some research and development advance at what has become one of the major medical research centers in the world—UAB, with some $40,000,000 in ongoing research projects.

The Medical Center, through a process that dates back a number of years, has become an acknowledged leader in this country and in the free world in heart, cancer, kidney and other research on the cutting edge of medical science.

The stories he has already done—the historic herpes simplex encephalitis breakthrough in the September issue, the renowned recombinant DNA work of Microbiologist Roy Curtiss in November—point the way to other articles of topical interest.

In this issue, for example, he has written a primer on one of the newest tools of research (and service to physicians), the electron microscope. Some physicians may be surprised to learn that there are at least 12 of these at UAB and that every day some of them are directly assisting Alabama clinicians in diagnosis of difficult cases.

The MDs and PhDs at UAB are committed to the triad of teaching, research, and service. They are teaching the physicians of tomorrow; they are performing the research that will be useful in practice this year, or 10 or 20 years from now; they are serving physicians in pathology now.

McDonald has found, through repeated visits to this research citadel, that all the researchers are eager to communicate with Alabama physicians. As one of them said, to the enthusiastic agreement of his colleagues:

"The end-product of all medical research is to give the practicing physician new tools and techniques. If research doesn't accomplish that — as research always has — then it is worthless. We are committed, as scientists, to giving the doctor more weapons to help mankind in his endless war against disease."

Although many of them realize they are cast as impractical, visionary, ivory tower types, they think that is an unfortunate notion — more for the physician perhaps than for them. For it is for the physician, they are all saying, for whom they are working — the physician and suffering humanity.

McDonald's approach is what a famous editor once called "studied ignorance." He reads everything he can on the subject beforehand and then tries to ask informed questions. He read two books on the electron microscope, for example, and one standard pathology text before attempting this month's story.

We would like to know which specific R&D subjects might be of paramount interest to Alabama physicians. We don't plan to go hog-wild on research, but only to include it periodically along with articles on practicing physicians.

Lon

S. Lon Conner

Time is the test of all things.

1954
1978



BRIEF SUMMARY

Indications: Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. May be used in the treatment of cardiac arrhythmias due to digitalis intoxication.

Contraindications: Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.

Precautions: Potassium intoxication by oral administration rarely occurs in patients with normal kidney function, however, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentrations of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

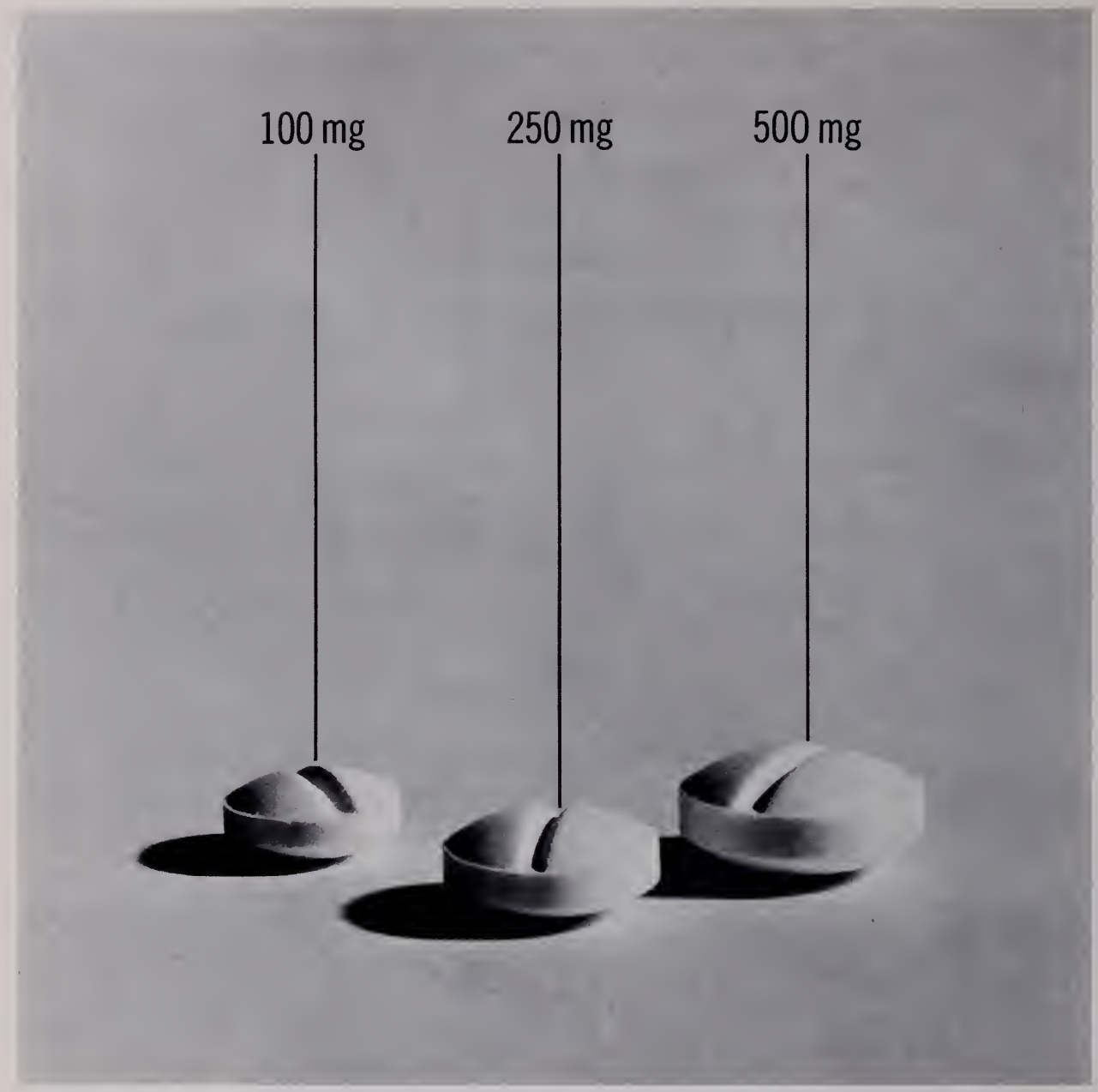
In hypokalemic states, especially in patients on a low-salt diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation.

Adverse Reactions: Nausea, vomiting, diarrhea, and abdominal discomfort have been reported. The most severe adverse effect is hyperkalemia.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications". Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

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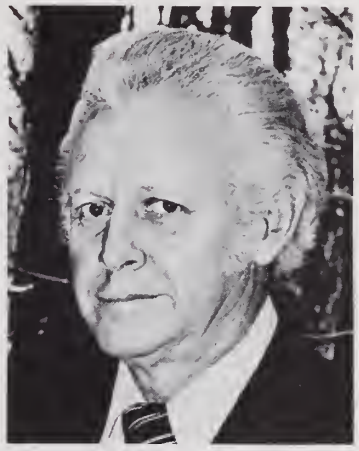
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The Physician, Paperwork, And The Computer

"The denial of Complexity is the beginning of Tyranny."

My first trip to Washington, D.C., was in 1939. At that time Washington was a city reached through Union Station, the dominant mode of transportation being by train, and as you walked out of the station you were struck by the long vistas of parks and boulevards, with national shrines and the capitol visible for miles in all directions.

The most striking change today is the hundreds of government office buildings of immense size which now clutter the parks, line the boulevards, obscure shrines and house thousands who make a living doing paperwork.

What does all this tell us about the nature of man and our relations to other men, both as physicians and citizens? What is it that makes centralized power and surveillance of every citizen such a laudable profession?

Why is it that we as citizens tolerate and even welcome restrictions and constrictions on personal freedom and why do we seem to abhore diversity and individual initiative?

Whatever the reasons for our paperwork mania the science and technology that split the atom and sent man to the moon have furnished a new device that is accumulating information on all of us.

Just when the paperworkers were about to be suffocated in poetic justice, along comes the scientist to put their paper in order again. Now the computer with a ravenous appetite for paper and the paperworkers with a ravenous appetite for paper have joined forces and are burying us.

Scarcely had we met, the computer and I, when it became obvious that we are destined to be barely civil to each other and for good reason. First, it speaks a foreign tongue and I'm poor in foreign languages; it lives on electricity and I prefer biscuits; it loves to do paperwork and I hate paperwork; it sits in a corner and has devious thoughts and I like sailing and golf and the outdoor life; it's a mathematical genius and I'm uncomfortable in arithmetic, especially with smart alecs who know all the answers. In short, we have absolutely nothing in common, and that's fine with me!

What really bugs me is that I soon learned that this monstrosity is rather particular about the kind of paper it likes. While the computer just sits in the corner and acts smart and strokes its $500,000 price tag, we physicians are expected to scurry around and write notes to each other and tell our innermost professional secrets to each other, aand write detailed progress reports and discharge summaries and burn up our typewriters filling out forms and doing all of this gratis, when we could be seeing patients or developing a better bedside manner or even being intimate with some other human.

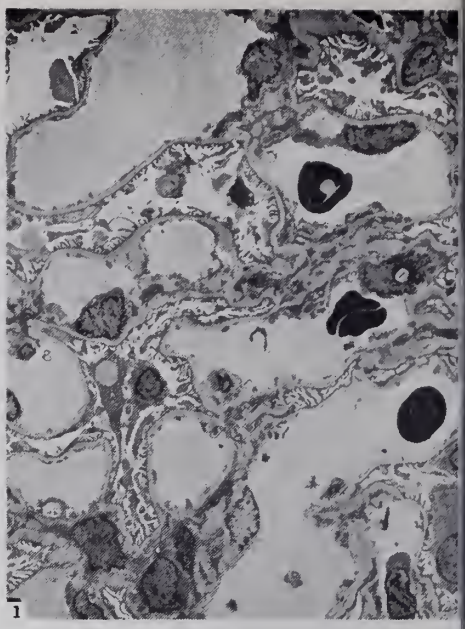
But, you see, computers all have blank paper and are ecstatic over the written word.

The computer is the spy in the backroom. It is being used for surveillance (spying) of the medical system by watching what we say and do in the following systems:

- Illness and the extent of it.
- Quality and appropriateness of care.
- Monitoring costs—physicians, hospitals, nursing homes, drug stores.
- Physician behavior, especially unethical and culpable behavior.

No one knows how many billions paperworkers and paper costs but it seems only fair that physicians should have a few friendly computers of their own.

John B. M. Rice, Jr., M.D.



The Small, Small World Of Electron Microscopy

By WILLIAM H. McDONALD

A young patient at Birmingham's Children's Hospital had been treated more than a year for lymphoma, but was not responding to chemotherapy.

The puzzling case was referred to Tariq M. Murad, M.D., Ph.D., Professor of Pathology, and Director, Division of Surgical Pathology and Cytology at UAB.

Dr. Murad ordered another biopsy to submit it for examination by electron microscopy, a relatively recent arrival among the tools of modern pathology.

"It was obvious with electron microscopy that the tumor was of striated muscle origin," Dr. Murad said. The earlier diagnosis had been in error.

The new diagnosis was rhabdomyosarcoma; the patient responded to chemotherapy tailored to that diagnosis.

"With all small cell tumors," Dr. Murad says, "you are going to see the problem of specific diagnosis, which becomes difficult. Pathologists may bicker and argue using the light microscope. The electron microscope settles many arguments."

A Better Tool

The electron microscope is no final solution to anything, any more than the other tools of medicine are, but with its high magnification capability and its startling resolution, the new hardware has greatly multiplied the software of the human mind.

Basically, the modern instrument is of two designs: The Transmission Electron Microscope (TEM) and the Scanning Electron Microscope (SCEM). The Department of Pathology at UAB, as well as other offices, uses each for its own special talents. (There are more than 12 EMs at the Medical Center.)

The TEM "sees" through the specimen, which must be specially prepared by highly sophisticated techniques.

The SCEM, as its name suggests, scans the surface of specimens with a beam of electrons that, when backscattered, give a magnificient topographic view of the specimen that is so aesthetic SCEM pictures have lately become a new art form in popular magazines.

A Place For The Old

The compound light microscope has virtually reached the end of its theoretical possibilities, after refinement since the 16th Century. It is by no means obsolete; electron microscopists use it to select the area they want to explore to the depths of the ultrastructure of matter.

The light microscope assists them in keeping their bearings. It is an occupational hazard of the minute world of EM that the unitiated can lose all perspective—missing, as they say, the forest for the trees, confusing artifacts with reality.

Also, light microscopy is often all that is needed. It is faster. The preparation of EM specimens is an elaborate process of microtoming in an instrument so precise it must be suspended on air to eliminate vibrations. The specimen must also be fixed and imbedded in special materials. Many books have been written about the arts of EM specimen preparation, and more is yet to be learned.

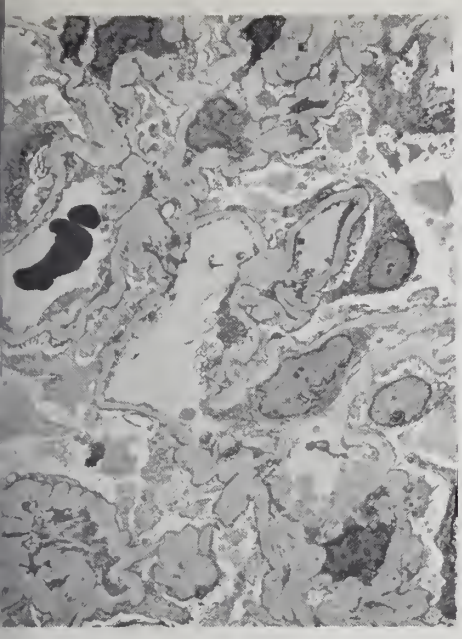
At one time, the EM's effective range was thought to begin about where the light microscope left off, around x1,200, give or take a bit. But now, with new technological advances, it can effectively perform as low as x50 and, with some instruments, as high as x1,000,000, although these upper ranges are often "empty magnification," and not needed. The mid-ranges are most useful in typical medical research and service. Here, the EM provides pathologists and researchers exquisite resolution no light microscope can match.

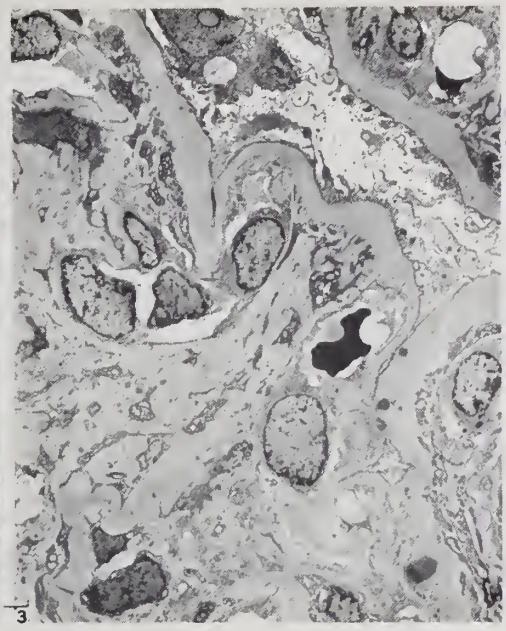
A Major Advance

Although UAB's scientists have a professional distate for superlatives, it can be said that the electron microscope is this century's most important contribution to the exploration of matter.

It has, in the last few years, become a valuable tool to the practicing physician in addition to its unchallenged niche in research, where it has facilitated countless discoveries and even proven the theories postulated by some earlier conceptual thinkers. (It has also disproved some, but that is another story.)

While it took the light microscope two centuries to reach its peak of perfection, the electron microscope accomplished this in two decades,







1) This electron microscope view at x3,600 shows part of a normal kidney. The dark masses are red blood cells surrounded by the capillary lumen. Also seen is the filtration barrier, the river-like matter encircling the capillary lumen, endothelial cells, epithelial cells, basement membrane, foot processes, mesangial cells and more. 2) To the expert's eye, this shows some scarring, although the damage is medically controllable. 3) Severe damage. The patient might be a candidate for dialysis or transplant. 4) Dr. Hartley moves in for a closer look at the basement membrane, x12,600, studying subepithelial and subendothelial deposits and other ultrastructure details.

producing quantum leaps in information that will require many more years to evaluate and interpret.

The EM provides a close look at the infinitesimal world between the cellular and molecular levels. (No comparable instrument now exists for the molecular; that may be the next step in ultramatter exploration.)

The EM has established the link in the life sciences between the world of the cytologist and the pathologist on one hand, and the biochemist and biophysicist on the other.

Roots In The 19th Century

To establish EM's earliest roots, it would be necessary to go back to the end of the previous century, but the major developments are more recent. The de Broglie theory of 1924 suggested that a moving electron could be thought of as having the properties of a light-like wave.

Two years later, Busch demonstrated that properly shaped magnetic or electrostatic fields could be used as lenses to focus an electron beam to produce an image.

The EM is analogous in many ways to the light microscope. An electron beam is focused by "lenses" (not glass but electromagnets) on or through a specimen by a system of other lenses, then focused on special photographic film or a screen for visual observation.

The first crude ancestors of today's precision machines were developed in the 1930s. First commercial production began in Germany in 1939. The first commercially produced electron microscope in North America was developed in 1941 by RCA, but myriad problems of resolution, stable power supplies, better objectives, mechanical and thermal stability, etc., required many more years of evolution to reach the present state of the art.

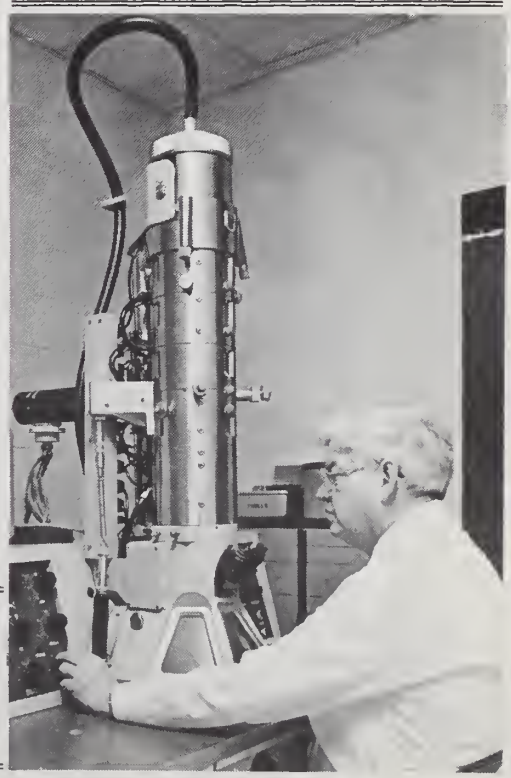
S.P. Bishop, DVM, Ph.D., Director, Volker Hall EM Facility, UAB, says:

"In the mid-50s, the electron microscope started being used. By the 1960s, people were devoting their lives to the instrument. Now we are at a point where it is no more difficult to use than a good light microscope."

Dr. Bishop's special province is the heart. He has been studying aspects of the heart muscle, having spent years finding out what happens in the small EM world with "Z-bands" and "intercolated discs" and the like in the hypertrophied heart. He has written learned papers on the subject, sharing with others his finds and gaining from theirs.

But it is a long road to finding precisely out why the human heart fails—his work now is done on a carefully bred strain of Japanese rats prone to hypertension and heart disease.

Life is short, but research is long,



Marshall W. Hartley, Ph.D., Director, Renal Biopsy Service, UAB, adjusts the Transmission Electron Microscope in UAB's Volker Hall for a better look at needle biopsy taken from a kidney patient.



The Small, Small World Of Electron Microscopy

"We're curing patients who haven't been born . . ."

S. P. Bishop, DVM, Ph.D., Director, Volker Hall Electron Microscope Facility. Behind him is the Scanning Electron Microscope, which gives a minutely detailed topographic view of the surfaces of ultramatter.

Dr. Bishop says: "The patients we are curing haven't been born yet."

Marshall W. Hartley, Ph.D., Director, Renal Biopsy Service, says the EM is now used about 30% in clinical service to about 60% in research. Until five years ago, the EM was almost entirely a research tool.

On Dr. Hartley's desk is a log book of his renal biopsies, hundreds of them. Two of the most recent in entries are for biopsies done for physicians in North and South Alabama. So precise is the EM monitoring of renal biopsies, he can often see and report to the physician the effects of medication heretofore invisible.

The boss of Drs. Hartley and Bishop is J. C. Geer, M.D., Chairman, Department of Pathology, who has the cautious attitude of the experienced physician and researcher toward the EM:

"Everything is an artifact. While we can tell the exact origin of a tumor cell, and undifferentiated cells can sometimes be identified, basically it's just higher magnification.

"Cells must be stopped at a process that is as close to the reality of the living cell as possible. The limitation of the method is the very small amount of tissue that is used in the EM from an organ that may weigh several pounds.

"We have considered the forest, we are now looking for trees.

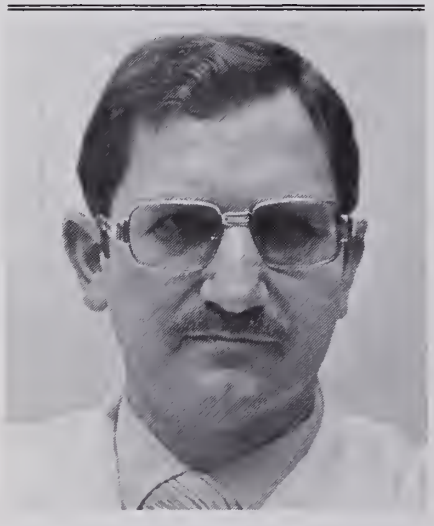
"It's just another technique. Sometimes, it's just quality control."

Dr. Geer was not being a debunker, merely prudent. He plainly fears too much glory being given to technology, a view that is seconded by Dr. Hartley, who adds:

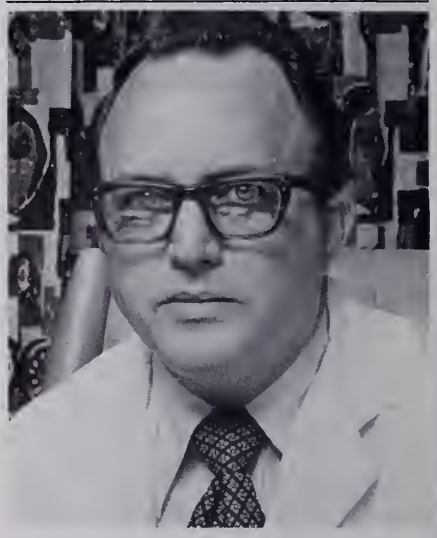
"We have the hardware. The problem is the software," grinning and pointing to his head.

But the EM has made profound impressions on such practitioners as Paulette S. Pritchett, M.D., Surgical Pathologist, Cooper Green Hospital, who says:

"The EM sometimes helps us make the diagnosis in determining the exact cell type. It clinches the diagnosis, often with a marked effect on treatment."



DR. MURAD



DR. GEER

40 Years Later

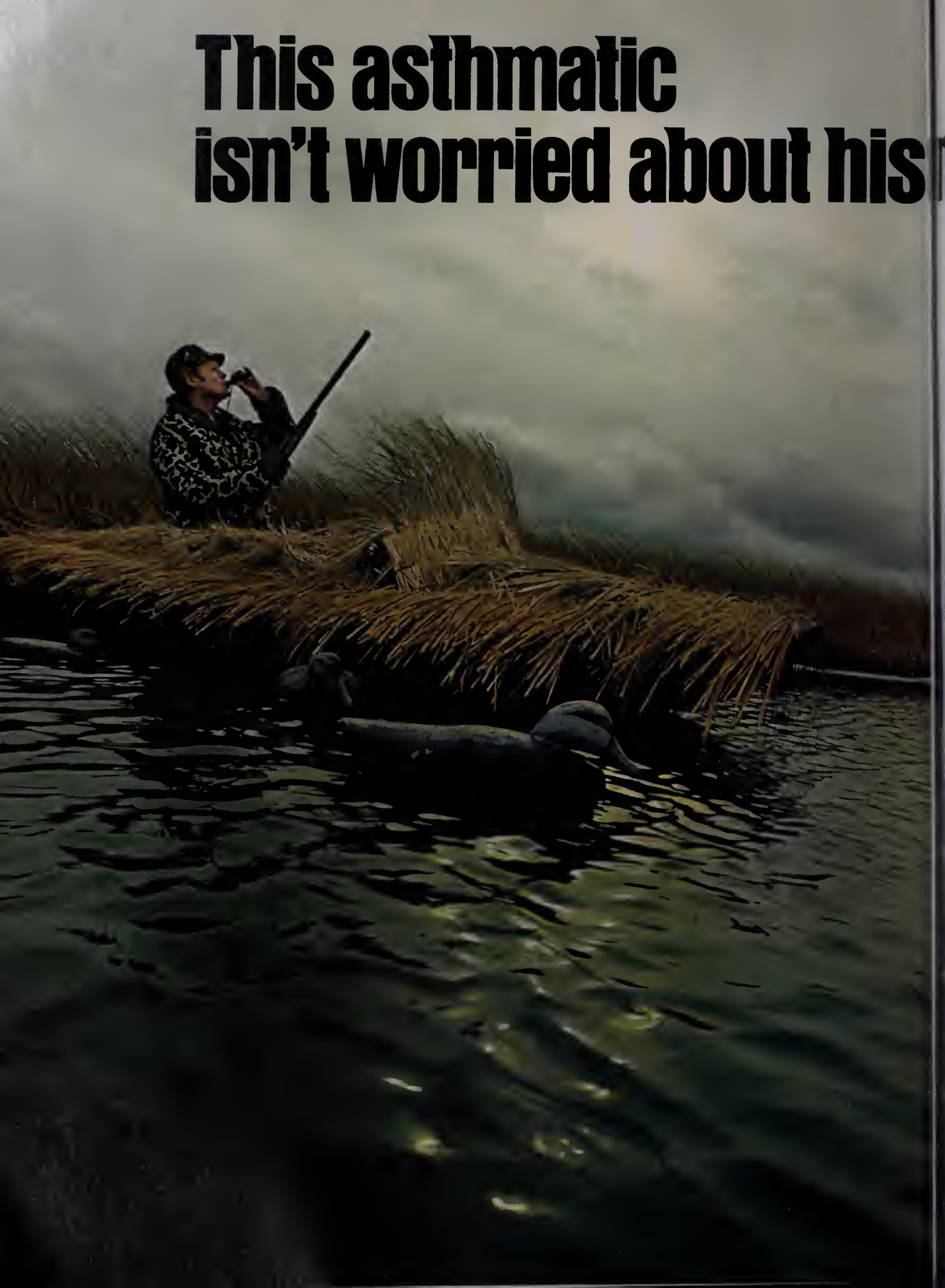
The electron microscope has come a long way since its primitive beginnings 40 years ago. No longer just a fascinating toy of research, available only to men who had devoted their lives to it, it is now a highly useful addition to the armamentarium of medicine and medical research.

The Volker Hall EM facility will have a new EM by summer, the Phillips 400, made in Holland, with a price tag of about $140,000, well below the hundreds of thousands it might have cost to build one from scratch decades ago. The basement of Volker Hall, the Basic Sciences Building, is being prepared for it.

By then, the power shortage may have abated, and a good thing too. The electrical cost of operating one EM is $40 a day. *(See Page 34)*


COLACE prevents hard, dry stools common to constipation . . . and does it without laxative stimulation. COLACE assists peristalsis by simply letting intestinal water permeate stools.
COLACE helps to prevent painful straining at stool—particularly important in patients with delicate anorectal disorders. Safe and non-habit forming . . . COLACE, the simple water way to ease constipation from infancy to old age.
Simple drops of water help make COLACE® the most widely used stool softener.
COLACE®
dioctyl sodium sulfosuccinate
Mead Johnson
PHARMACEUTICAL DIVISION

This asthmatic isn't worried about his



next breath...

he's active
he's effectively
maintained on

QUIBRON®

Each capsule or tablespoonful (15 ml) elixir contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg. Elixir: alcohol 15%

high theophylline for effective around-the-clock therapy

Quibron may give the asthmatic up to eight hours of bronchodilation with each dose and provides the high dosages of theophylline which are now believed necessary to keep patients free of acute attacks and chronic wheezing.

100% free theophylline

Quibron helps achieve high serum theophylline levels with minimal dosage volume...delivers 100% free theophylline in comparisan ta many ather compounds which contain from 47% to 91% effective theaphylline.

individualized theophylline dosage schedule

Taday's more efficient usage of theophylline includes individualizing dosage and monitaring serum theophylline levels. The usual recammended dosages of Quibron are: Adults—1 ta 2 capsules or tablespoonfuls every 6 to 8 hours; dasage may be cautiausly adjusted upward when necessary to a maximum of 2000 mg theaphylline per 24 hours. Children under 12—4 ta 6 mg theophylline per kg/bady weight every 6 to 8 hours; dasage may be cautiously adjusted up to 9 ar 10 mg/kg every 6 haurs.

Now, for the asthmatic who requires high-dose theophylline therapy for therapeutic serum concentrations

Mead Johnson Pharmaceutical Division announces

QUIBRON®-300

Each capsule contains 300 mg theaphylline (anhydraus) and 180 mg glyceryl guaiacalate (guaifenesin)

For Brief Summary, please see the last page of this advertisement.

QUIBRON®-300

Each capsule contains 300 mg theophylline (anhydrous) and 180 mg glyceryl guaiacolate (guaifenesin)

The new high-dose theophylline capsule... for dependable theophylline therapy when products of lower dosage do not adequately control asthma symptoms.

Specially formulated

...for optimal efficacy

Quibron-300 is appropriate therapy for asthma patients whose symptoms are not adequately controlled on lower doses of theophylline, particularly for patients whose theophylline dosage has been adjusted upward to achieve therapeutic serum levels. In one study,[1] an average peak increase in FEV_1 of 35% was demonstrated after a single dose equivalent to one Quibron-300 capsule, and significant improvement in this pulmonary function lasted for nearly eight hours after administration.

...for optimal predictability

One Quibron-300 capsule q6-8h yields therapeutic serum levels (10-20 mcg/ml) in many adults. With a single dose, more than 75% of patients achieved serum levels potentially providing clinical benefit (5-15 mcg/ml). Half-life of theophylline varies widely from patient to patient, making monitoring of theophylline therapy important. Patient response may be monitored clinically if blood levels are not available as long as dosage does not exceed 1200 mg in 24 hours for adults.

...for optimal dosage convenience

The simple, convenient dosage of new Quibron-300—one capsule every six to eight hours—makes it easy for patients to comply with high-dose regimens often required to achieve therapeutic serum levels. Quibron-300 capsules may provide maximum therapeutic value with maximum convenience. In fact, the switch from a low-dose to a high-dose regimen may be accomplished by merely switching capsules, by stepping up to Quibron-300 capsules.

...for minimal theophylline side effects

Adverse reactions to theophylline are related to serum levels and are usually not a problem at concentrations below 20 mcg/ml. Of 45 patients studied[1] after a single dose, only seven reported adverse reactions. The most common reaction was a feeling of lightheadedness by three of these seven patients.

Reference 1. Data on file. Mead Johnson Pharmaceutical Division.

Indications: For the symptomatic treatment of bronchospastic conditions such as bronchial asthma, asthmatic bronchitis, chronic bronchitis, and pulmonary emphysema.
Dosage: Quibron—Adults: 1-2 capsules or 1-2 tablespoonfuls elixir every 6-8 hours. Children under 12: 4-6 mg theophylline/kg body weight every 6-8 hours.
Quibron-300— Adults: 1 capsule every 6-8 hours.
Theophylline dosage may be cautiously increased to 2000 mg/24 hour in adults and 9 or 10 mg/kg every 6 hours in children. Monitoring of serum theophylline levels at higher dosages is recommended.
Precautions: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other xanthine derivatives concurrently. Use in case of pregnancy only when clearly needed.
Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 μg/ml.
How Supplied: Quibron Elixir: Bottles of 1 pint and 1 gallon. Quibron Capsules: Bottles of 100 and 1000 and unit-dose packs of 100. Quibron-300 Capsules: Bottles of 100.

Mead Johnson PHARMACEUTICAL DIVISION

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Health, Medicine, Accounting And The GNP

By James A. Pittman, Jr., M.D.,
Dean, University of Alabama School
Of Medicine, UAB, Birmingham

The United States Congress and the President appear about to pass legislation to provide the U.S. populace with something called "comprehensive health insurance," although nobody is exactly clear on precisely what will be covered.

Statistics have recently been cited showing the awful state of health of Americans. Thus, it is pointed out that males living in America in 1973 had a shorter life expectancy than males living in 14 other countries of the world[1]. And the United States was 19th in infant mortality[1].

Further, within the U.S. itself there are disturbing disparities between the health status of various groups, particularly non-whites compared with whites.

All these deficiencies have been rendered even more unacceptable to the public because of the abounding evidence that we apparently already have the wherewithal to correct such deficiencies and inequities. We have more hospital beds per capita than almost any other nation, and we have more physicians per capita than most other nations, the Soviet Union being the conspicious exception.

The clincher is that we have more health care facilities and personnel in the U.S. than other countries in which the populations have a better health status than U.S. citizens. Put this observation together with the fact that governments — federal, state, and municipal — provide a large proportion of the money now supporting "the health care industry" in the United States, and you can foresee not only the diagnosis but the upcoming treatment.

Something Is Wrong

Obviously there is something wrong with the way things are distributed in the United States. And, almost equally obviously, the costs, which are running wild and which must be controlled before they overtake the GNP (gross national product), are not being effective in obtaining health services for rural and inner city populations, much less improving the health status of the populace as a whole. In fact, a statement has recently been made to the effect that the health care enterprise may cause more human misery and disability than it cures.

Ivan Illich in his book *Medical Nemesis: The Expropriation of Health,* makes essentially that charge[2]. It has been suggested that Illich intended his book as a humorous prod to physicians, but this is not so. This outlook fits consistently with that in his other books. Whether or not physicians are *bad* for people's health, the statistics which abound in Illich's book tend to support the idea that physicians certainly are not much of a positive factor in the overall health status of the populace. Similar statements have been published in such influential and prestigious publications as the *Wall Street Journal*[3] and the *American Scholar*[4].

This appears to be a generally accepted truism of the day. Listen to what the health planners are saying: "During the past 20 years, while the price index in the United States has risen by about 74%, the cost of the medical care sector of health has escalated by 330%. At the same time, health status has not improved proportionally"[5].

Or, according to the proposed guidelines, Section 2.31, of the National Health Planning and Development Act of 1975 (Public Law 93-641):

"Many health problems are caused by a variety of factors, not susceptible to direct medical care solutions. These include the state of the environment, diseases and injuries of the work place, the safety of products, motor vehicle accidents, nutritional care, social psychological conditions, and behavioral factors such as smoking, physical inactivity, inappropriate food consumption, alcohol and other substance abuse. The HSP (Health Systems Plan) should address these other determinants of the development or achievement of health status or health systems goals. Yet, while non-medical factors are important aspects to be taken into account in planning, the need for development and regulation of the health care systems based upon the HSP necessitates the major emphasis of HSA efforts, at least in the first few years, on medical care."

Allegedly, "medical care" ranks "only fourth in affecting health status ...education, housing, and nutrition have more impact"[6].

Enter 'Maldistribution'

Redistribution is the rallying call, and interestingly it was first sounded loud and clear by a physician, Dr. William Roy, while he was a member of Congress, when he introduced HR-14357, in opposition to Congressman Paul Rogers' health manpower bill of 1974. Roy claimed that there was no longer a deficit in the total number of physicians. What was wrong was the distribution. Wrong by geography and by specialty, thus generating the term "maldistribution" and implying that somebody knows what is "eudistribution."

Redistributing resources is not easy. Huey P. Long, Kingfish of Louisiana, called for "redistribution of the wealth" during the depression of the mid 1930s and got assassinated for his efforts. Nevertheless, "health" is the most valuable of all human possessions, so it is worth high risks to redistribute the resources, and P.L. 93-641 and the health planning agencies are setting about to do just that.

The National Academy of Sciences' National Research Council (NAS/NRC) has just released a committee's *Summary Report: Drinking Water and Health*[7]. The report concludes that bacteriological standards now in use for U.S. drinking water do not necessarily provide adequate protection against waterborne diseases, particularly when water supplies are reclaimed in part directly from wastewater. Obviously this is a health problem. But it is also an engineering problem. In fact, much of modern medicine and medical technology could be classified as "engineering problems." There are units in modern medical centers called "bioengineering centers," and the NIH is busily funding the development of more such centers.

Perhaps the problem is not so much that *medicine* is consuming an excessive portion of the GNP as that *engineering* is consuming too much. That might be one translation of the current attempts of health planners to limit the number of computed axial tomography (CAT) scanners purchased with public funds (funds earmarked for "health care").

What, then, are the limits to the

terms "medicine," "medical care," "health," "health care," and related terms? Where does medicine end and engineering begin? Or, more precisely, where do medicine and health begin? Why do people want "health care" anyhow?

Well, people usually do not go to a physician to look after their health. They usually go because of a symptom. They do not go for "health care;" they go for "medical care" or "sickness care." This is, of course, an extremely explosive topic. One immediate response is that if people sought more health care (e.g., immunizations, well-baby clinics, etc.), they would have less need to go later for sickness care. And this is obviously true. But should not immunizations be categorized under "preventive medicine" rather than "health care"? Is that not a clearer, and therefore more responsible, way to state it? In the 1930s there were some, including some prominent in the American Medical Association, who promoted the idea of "sickness insurance." It would seem that this, not "health insurance," is what people want (and "demand" and probably "need").

But what will the President provide? Probably syphilis and gonorrhea will be covered, and because so many people have them these days, and nobody could disregard that many votes. However, I recall a time not so long ago when the U.S. Veterans Administration would not consider these as service-connected and treated them with some reluctance. They were considered more the responsibility of the individual than the government.

Will coverage be provided for the cirrhosis resulting from too much alcohol? How about domestic quarrels resulting in mental illness? That must be covered. How about mental illness resulting from loss of a job? That's certainly a reality. Will the costs of insuring pure water be included in the costs of a plan for comprehensive health insurance? We have just noted a statement from the NAS/NRC confirming our belief that it will cost more to insure good drinking water, and bad drinking water is certainly bad for one's health status. The same applies to good food and nutrition. If the cost of the FDA should be included, why not include the cost of the food itself? Surely, one does not remain very healthy very long with no food. Similar arguments apply for clothing, housing, and education.

Accounting Inflation

The above is not so facetious as it sounds. Ginsburg has recently pointed out that at least a part of the present escalation in "health care costs" is the result of accounting changes[8]. Thus, whereas Grandma a generation or so ago was sent to a "rest home," the cost of which was not totalled under the rubric of "health care," now Grandma goes to a "nursing home," and this cost is included. In fact, it is included so much that nationwide almost half of all Medicaid expenditures go for nursing home care[9].

The problem is not new. Confucius was asked by Tzu Lu around 500 B.C., "If the ruler of Wei should put you in power, how would you begin?" Confucius answered, "I would begin with the rectification of names." "Do you really mean that?" asked Tzu Lu. "How old and impractical you are!" But Confucius replied, "Ah, you are simpleminded indeed. If the name is not rectified, then the whole style of one's speech falls out of form; if one's speech is not in form, then orders cannot be carried out; if orders are not carried out... then ...the proper forms of social intercourse cannot occur."* Modern semanticists might concur that, without any general agreement and understanding of what one means by a particular word of phrase, we cannot accomplish much except confusion. But this is the era of politics in medicine, and modern politics is usually the enemy of truth. People do not act on the basis of *facts,* but on the basis of what they *believe* to be facts. Hannah Ahrendt's discussion of "Politics and Truth" is instructive here[11].

Confusion of terms and concepts serves not only to confuse the accountants, politicians, and public. It is also a weapon for professional groups. I was roundly castigated by an allied health person for speaking of the Veterans Administration's Regional *Medical* Education Centers, authorized under P.L. 92-541. "They are for educating all health professionals," he said. "Why don't they call them Regional *Health* Education Centers?" (The simple answer is that they are called "medical education centers" in the law.) One would have to know this particular health professional to understand fully the thrust of his comment. He is militant about professional equality for all "health professionals" and an end to the era of physician domination[12]. The term "medicine" has been long associated with physicians. Thus, the term "health professionals" is a semantic weapon for aggressive professions (e.g., pharmacists vs. physicians) – a verbal battering ram for grabbing turf from the established medical kulaks.

'Health Care' Binge

While the accountants and the politicians wrestle with what and whom to include in or exclude from "health care costs" and "health insurance," the public has been treating the whole affair as a party. It is going on a great binge of "health care." This is particularly true of the politicians and the educational institutions. Millions are spent for training "health care teams" without ever really defining rigorously what it is those millions are trying to accomplish. Surgeons are accused of doing "unnecessary" hysterectomies, and doing them partly because they are "free." People covered by Medicaid visit the physician with trivial complaints – or "just for a checkup" – who would not do so if there were a disincentive. People do not really want too much health care; they want medical care after they abuse their health. They want to booze it up, banquet it up, love it up, never exercise, and drive fast, then they want the doctor to bail them out of trouble.

What is to be done? Well, Congress has played some role in getting us into this semantic mess, so maybe it can get us out. When nobody had generally acceptable data to prove there were too many, just enough, or insufficient physicians in the country, the Congress solved the problem its own way: "Congress finds and declares that there is no longer an insufficient number of physicians and surgeons in the United States" (P. L. 94-484), and that was that. Now, certainly, national defense and the costs for the Department of Defense could reasonably be included under "health care." I would have

*Unfortunately, Confucius was trying to restore social order by restoring a feudal society, and there will be those who accuse anyone quoting him of trying to impose a feudal arrangement in medicine. However, the principle of proper nomenclature transcends that discussion.[10]

nervous agitation indeed if I thought the Russians were about to take us over. Thus, the Congress should simply "find and declare" that "the total gross national product is allocated to health care." Then we could get on with the discussion of the components. For one thing, we could get back to worrying about providing adequate *medical* care to those who have myocardial infarcts, cancer of the cervix or lung, fulminant diabetes mellitus, broken legs, crooked feet, suspected brain tumors, and the like.

Not even the United States Congress can legislate total well being for all members of the populace. Or, if they do, they should not complicate matters by getting their terminology more mixed up than necessary. Public health and many other aspects of "health care" are perfectly respectable and fundable disciplines. But "sickness insurance" is not the same as "health insurance," and neither can substitute for individual responsibility. The problem then becomes more visible: to provide adequate access to a system of quality medical care for all, especially the poor and the middle class, and to cover the costs of catastrophic illness. □

REFERENCES

1. Francke, D.E., and Whitney, H.A.K., Jr.: Perspectives in Clinical Pharmacy, Hamilton, Illinois; Drug Intelligence Publications, 1972, Chapter 1.
2. Illich, I.: Medical Nemesis: The Expropriation of Health. New York, Bantam Books, 1976.
3. Cassell, E. J.: The limits of modern medicine. Wall Street Journal, Tuesday, August 2, 1977 (also in The Healer's Art, Philadelphia, J. B. Lippincott Co., 1976).
4. Michaelson, M.G.: Failure of American Medicine, American Scholar 39:694 (Autumn) 1970.
5. Birmingham (Alabama) Regional Health Systems Agency: Health Systems Plan 1977-1981 (Draft). Birmingham, Alabama; BRHSA, December 1976, p. ix.
6. ibid. p. 1.3-2.
7. National Academy of Sciences. News Report. Vol. 27, Vo. 8, p. 1, August 1977.
8. Ginsburg, L. H. (Department of Welfare, State of West Virginia, Charleston). Address at University of Alabama, June 21, 1977.
9. Thigpen, R. A.: Alabama Project on Medicaid, Alabama Law Institute, University, Alabama, 1977. (In press)
10. Analects. by Confucious. Translated by Arthur Waley, New York, Random House, 1966.
11. Adrendt, H.: Truth and Politics. New Yorker (magazine), February 25, 1967.
12. Francke, D.E., and Whitney, H.A.K.: op. cit. p.7.

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

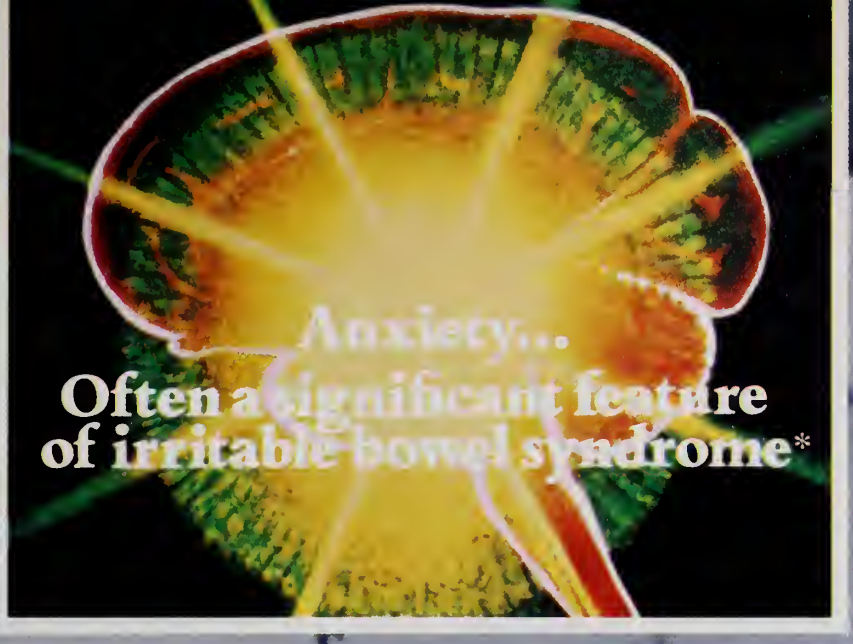
As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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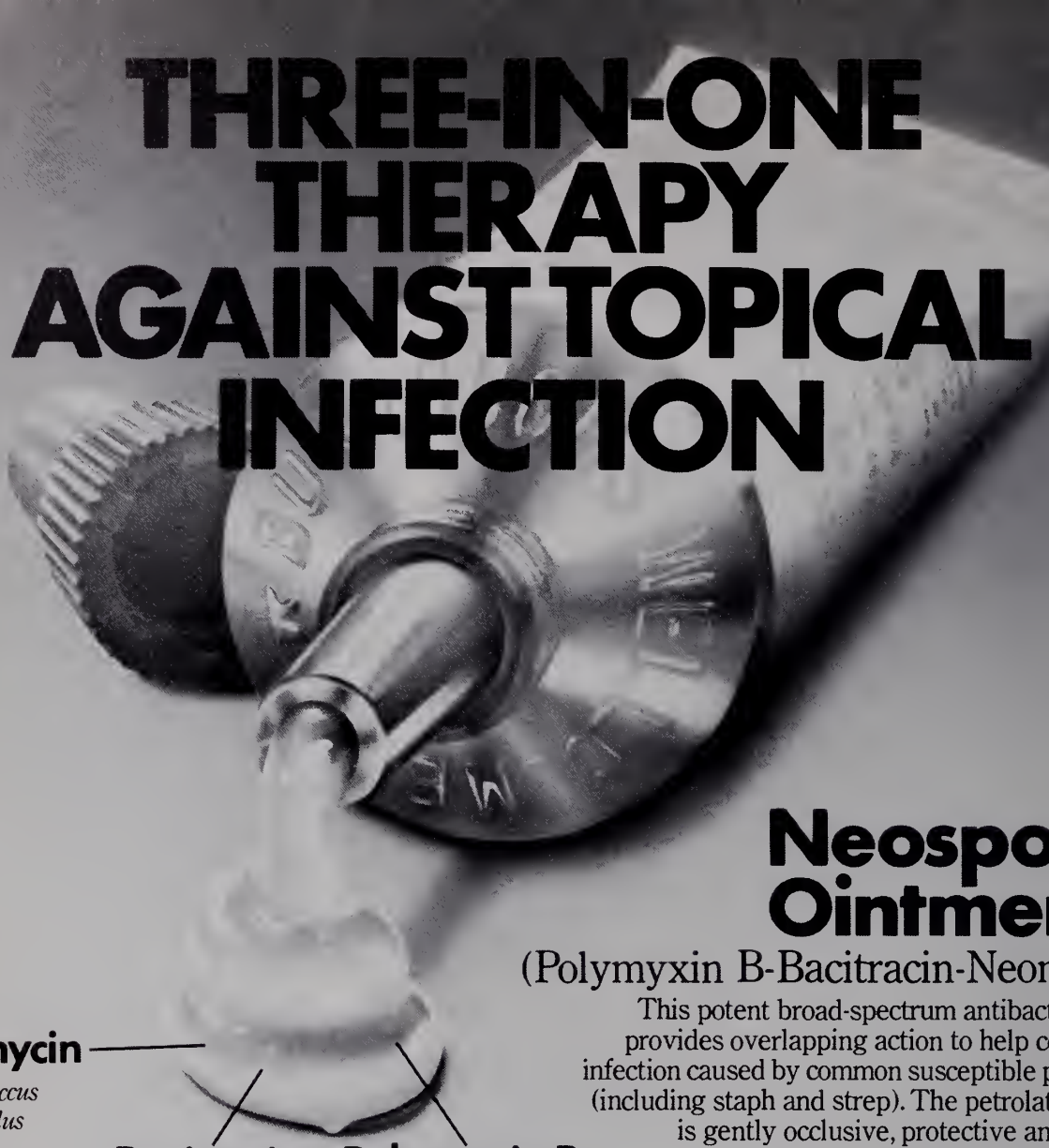
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Antisecretory
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Librax is unique among G.I. medications in providing the specific antianxiety action of Librium® (chlordiazepoxide HCl) as well as the potent antisecretory and antispasmodic actions of Quarzan® (clidinium Br) for adjunctive therapy of irritable bowel syndrome* and duodenal ulcer.*

*Librax has been evaluated as possibly effective for this indication.
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Escherichia
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Streptococcus
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Bacitracin

Staphylococcus
Corynebacterium
Streptococcus
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WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

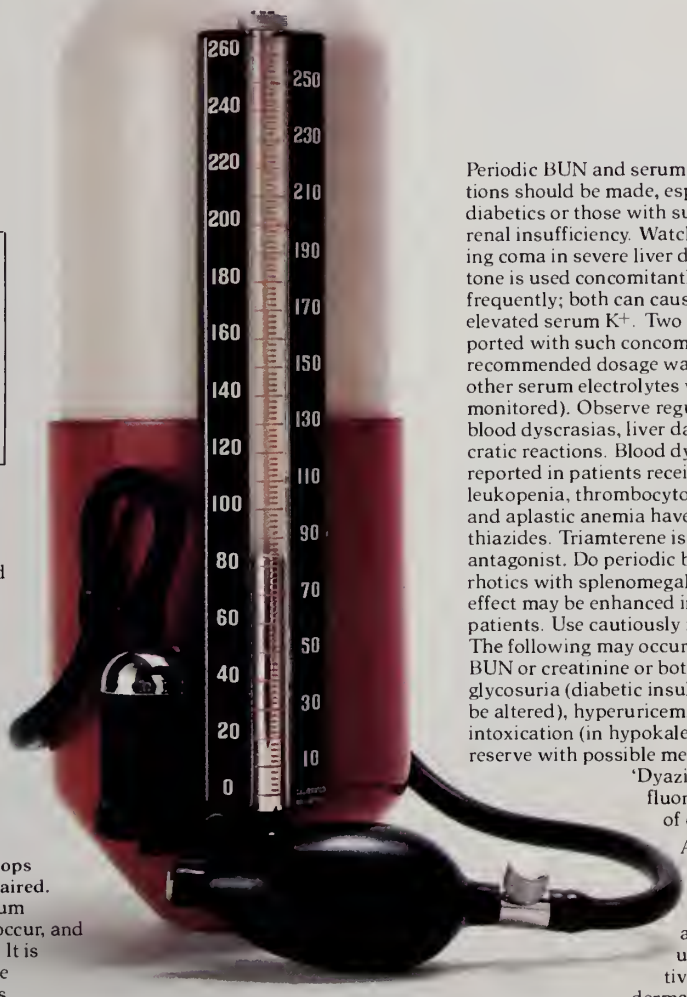
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Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE



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* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

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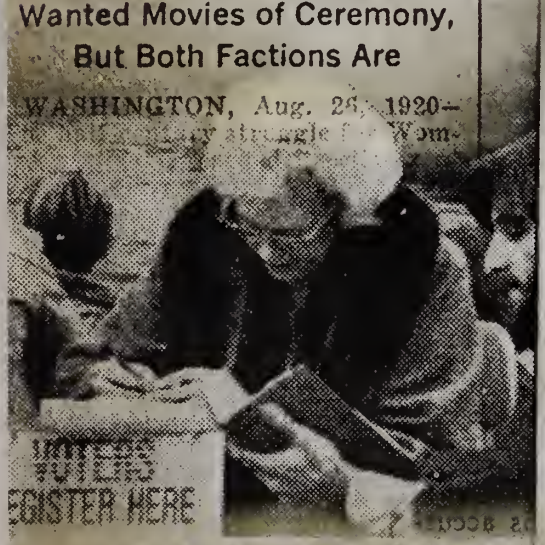
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COLBY PROCLAIMS WOMAN SUFFRAGE

Signs Certificate of Ratification at His Home Without Women Witnesses.

MILITANTS VEXED AT PRIVACY.

Wanted Movies of Ceremony, But Both Factions Are



WASHINGTON, Aug. 26, 1920—

Social Security Bill Is Signed; Gives Pensions to Aged, Jobl

Roosevelt Approves Message Intended to Benefit 30,00 Persons When States Adopt Cooperating Laws–He C the Measure 'Cornerstone' of His Economic Prograr

WASHINGTON, Aug. 14, The Social Security Bill, pr a broad program of unempl insurance and old age pe and counted upon to benef 20,000,000 persons, became day when it was signed by dent Roosevelt in the pres those chiefly responsible f ting it through C s.

Mr. Roosevelt cal n. "the cor erstone wh is being me s c pl

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today, 94 to 0, and sen

UL IGNI the Draf Ends No

TRUMAN CLOSES TED NATIONS CONFEREN ITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can be in history!"

Just before the plenary session

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the



PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST. N. W. WASHINGTON, D. C. 20005

Brief Summary of Prescribing Information

Actions: Pyrvinium pamoate appears to exert its anthelmintic effect by preventing the parasite from using exogenous carbohydrates. The parasite's endogenous reserves are depleted, and it dies. Povan is not appreciably absorbed from the gastrointestinal tract.

Indication: Povan is indicated for the treatment of enterobiasis.

Warnings: No animal or human reproduction studies have been performed. Therefore, the use of this drug during pregnancy requires that the potential benefits be weighed against its possible hazards to the mother and fetus.

Precautions: To forestall undue concern and help avoid accidental staining, patients and parents should be advised of the staining properties of Povan. Care should be exercised not to spill the suspension because it will stain most materials. Tablets should be swallowed whole to avoid staining of teeth. Parents and patients should be informed that pyrvinium pamoate will color the stool a bright red. This is not harmful to the patient. If emesis occurs, the vomitus will probably be colored red and will stain most materials.

Adverse Reactions: Nausea, vomiting, cramping, diarrhea, and hypersensitivity reactions (photosensitization and other allergic reactions) have been reported. The gastrointestinal reactions occur more often in older children and adults who have received large doses. Emesis is more frequently seen with Povan Suspension than with Povan Filmseals.

How Supplied: Each Povan Filmseal® contains pyrvinium pamoate equivalent to 50 mg pyrvinium, supplied in bottles of 50 (NDC 0710-0747-50; NSN 6505-00-134-1966). Povan Suspension, a pleasant-tasting, strawberry-flavored preparation containing pyrvinium pamoate equivalent to 10 mg pyrvinium per milliliter, is supplied in 2-oz bottles (NDC 0071-1254-31; NSN 6505-00-890-1093).

RC/RD PD-JA 1699-2-P (8 76)

Parke, Davis & Company
Detroit, Michigan 48232

When it's pinworms, treat the family



Povan® (pyrvinium pamoate)

- over 17 years of proved clinical effectiveness and safety
- no measurable absorption from the GI tract—minimal systemic side effects
- one dose—one time—that's all that's usually required
- two dosage forms: Tablets and Suspension—suitable for the entire family

Povan—there's a form for every member of the family.

PARKE-DAVIS

Aftercare Success With Schizophrenics: Two-Year Follow-Up

William H. Goodson, M.D.*

This study examines the effectiveness of a community mental health center's aftercare program with schizophrenic patients. Two-year follow-up data were gathered to determine relapse/rehospitalization rates, welfare and role-adjustment status, and variables related to readmission. Results were also compared for a group of these patients who were similar to the study group of Hogarty and Goldberg (NIHM collaborative study).

Readmission rates (38.8%) were comparable to the collarborative study group. There was a trend to increased dependence on the welfare system, while a sizeable number of patients improved in role-functioning. Variables related significantly to community survival were: reliability of medication-taking, and length of follow-up contact.

The author believes that these results indicate cost-effectiveness by utilizing paraprofessionals at the Mental Health Center. Further research is urged, to determine the most effective systems of care for schizophrenic outpatients.

The efficacy of major tranquilizers in preventing relapse in schizophrenic patients appears to be well-established.[1-6] Usefulness of drugs and other therapeutic modalities in improving the quality of life of such patients is perhaps open to more question; however, the NIMH collaborative study performed by Hogarty, Goldberg, et.al,[1-3] does provide evidence supporting the value of so-called "sociotherapy."

Community mental health centers typically have programs designed to serve schizophrenic patients and their specialized needs.[7] It is the author's impression that most of these programs rely heavily on maintenance chemotherapy and supportive services, but that there is little evidence to indicate how effectively these modalities are used.

There is a need to provide evidence documenting the relative effectiveness of different types of program models. For instance, some programs include partial hospitalization, some utilize long-acting injectible phenothiazines and others may stress the use of indigenuous workers as therapists.

Research efforts in the future will be devoted, in part, to determining variables such as these which enhance community adjustment. Community mental health centers should be able to provide the settings for research with different locales.

It is the purpose of this report to (1) present two-year follow-up data regarding schizophrenic patients admitted to the Inpatient Service (IPS) of the Huntsville-Madison County Mental Health Center (Center) during calendar year 1973: (2) compare results for a group of these patients resembling the patient group studied by Hogarty and Goldberg,[1-3] and (3) present data regarding variables related to outcome.

It is the author's hope that other clinicians/researchers will undertake similar studies for comparison purposes, and promote inquiry as to the particular variables which may produce differential results with these patients with the ultimate goal of improving care.

The Clinical Setting

The Center is a comprehensive community mental health center, federally-funded since January of 1971. The network of service elements providing care for schizophrenic patients remained stable during the span of the study (1973-75). The key elements involved in the care of these patients (Inpatient, Day Treatment, and Aftercare) maintained stable relationships to one another throughout this period.

The IPS uses the community general hospital psychiatric unit's 35 beds to which Center and private psychiatrists admit patients. Center staff assigned to this service are the IPS Coordinator (an R.N.) and the Center's psychiatrist. Nursing personnel on the unit are hospital employees. IPS is oriented to short-term crisis care, with approximately 80% of Center admissions having "psychotic" diagnoses. Mean length of stay for all IPS admissions in 1973 was 13.4 days (range 1 to 53). Schizophrenic patients are treated primarily with chemotherapy, but also with individual and family supportive therapy, preparing all for an early

*Associate Director for Clinical Services, Huntsville-Madison County Mental Health Center.

TABLE 1. Characteristics Of Study Groups

		All Subjects	Total Follow-up Study Group	Discharged To Center	Hogarty-Goldberg
n		54	39	41	374
Age (mean years)		36.5	36.4	36.5	34.4
Sex (%)	Male	46.3	41.0	46.3	42.5
	Female	53.7	59.0	53.7	57.5
Race (%)	Black	37.0	41.0	39.0	50.3
	White	63.0	59.0	61.0	49.5
Marital Status (%)	M	53.7	59.0	58.5	36.1
	S	27.8	25.6	26.8	38.5
	D	14.8	10.2	9.7	7.0
	W	1.8	2.6	2.4	2.7
	Sep	1.8	2.6	2.4	15.5
Education (%)	<h.s.	61.1	71.8	70.7	64.7
	h.s.	20.4	17.9	17.1	21.1
	>h.s.	14.8	5.1	7.3	14.1
	Unknown	3.7	5.1	4.9	-
Family Income (%)					
$0-3000		51.9	48.7	46.3	23.8
3-7000		24.1	23.1	24.4	*
7-15,000		18.5	25.6	24.4	*
>15,000		5.5	2.6	4.9	*
Length of Stay Index Admission (days)		15.1	15.3	14.3	81.2
Number Previous Hospitalizations (%)	0	22.2	17.9	24.4	20.1
	1	27.8	25.6	26.8	20.1
	2	27.8	28.2	31.7	13.4
	3	14.8	17.9	9.8	13.6
	4	3.7	5.1	4.9	9.9
	5	3.7	5.1	2.4	6.1
	6+	0	0	0	16.5
Length of Previous Hospitalization (%)					
0		20.4	17.9	21.9	20.1
<12 months		38.9	46.1	43.9	44.4
>12 months		27.3	28.2	24.4	36.0
Unknown		13.0	7.7	9.8	-

* Comparable breakdown not available.

The author wishes to express appreciation to Roger Rinn, Ph.D., John McMillan, Ph.D., and A. Jack Turner, Ph.D., for critical review and comment; and to Pat Dean for preparing the manuscript.

TABLE 2.
Readmission/Relapse Rates Two Years Post-Discharge

	N	Readmitted	Relapsed
Total Follow-up Study Group	39	43.5%	51.3%
Discharged to Center	36	38.8%	47.0%
Hogarty-Goldberg	374	42.7%**	57%*

* This figure includes the 48% admitted during "study period" and 9% during "transition period".

** Calculated by applying the "75% of relapses rehospitalized" statement from study report.

discharge back to the community. A behavioral approach is emphasized in treatment planning, with goals clearly specified. This is true for all Center service elements.[8,9]

The Day Treatment Service (DTS) is a key link in service to schizophrenic patients. It is located in the main Center facility. Hospitalized patients frequently begin attending DTS while in the hospital. In 1973, IPS provided 45.8% of the referrals to DTS, indicating a close linkage between these two services. At times, DTS is also used in lieu of hospitalization. Treatment is behavioral and is heavily oriented to group activity, including group therapy skills training, vocational counseling and occupational/recreational therapies. Mean length of stay for all clients in 1973 was 31.3 days, and 66% were diagnosed "schizophrenic." Clinical staff is composed of a coordinator (Master's level), three counselors (sub-Bachelor level), and a consulting psychiatrist.

The Aftercare Service (ACS) is a component of the Center's Outpatient Division, and serves those clients deemed to be in need of long-term, active follow-up care. A Satellite Operations Team operates within this service as a neighborhood-based staff composed of indigenous workers. Home visits are made frequently. Clients are pursued actively if they fail appointments. Some patients are served by a special home-visitation program involving rewards for appropriate behavior.[7] In 1973, 81.8% of the clients carried psychotic diagnoses. During 1973-75, clinical staff consisted of the Service Coordinator (Bachelor level), an L.P.N., four Outreach Counselors (indigenous workers - sub- Bachelor) and a consulting psychiatrist. Mean number of clients served per year from 1973-75 was 393.

In 1973, 55% of referrals to this service came from either IPS or DTS, indicating again close linkage among components. Treatment is goal-

TABLE 3.
WELFARE STATUS Discharged-To-Center Group

	% Without Public Assist.	% With Public Assist.	Total
Pre-Index Hospitalization	87.5	12.5	100.0
Two Years Post-Discharge	62.5	34.4	96.9*

TABLE 4. MAJOR ROLE FUNCTION STATUS
Discharged To Center Group

	% Functioning	% Non-Functioning Not on Disability	% On Disability	Total
Pre-Index Hospitalization	46.8	40.5	12.5	99.8
Two Years Post-Discharge	59.3	12.5	24.9	96.7*

* One Patient Deceased

oriented, and directed to improved role functioning. Primary therapists use a variety of techniques, which include advocacy, instructions to families, supportive psychotherapy, monitoring medications, community service liaison, as well as the home-based reward system referred to previously. Close liaison is maintained with the local rehabilitation center, sheltered workshops, and vocational rehabilitation services. Clients are typically seen monthly or more often by the primary therapist and less often (minimally every six months) by the psychiatrist, when on medication.

METHOD

This is a retrospective study and has all the limitations adherent thereto. There are also advantages, however, since it studies the naturally-occurring events in a system of care without the confounding variable of having a "research design" imposed (e.g., experimenter bias and demand characteristics).

The study sample consists of all Center patients admitted to the Center's IPS during calendar year 1973 who were diagnosed "schizophrenic". Patients with drug abuse history other than alcohol were excluded; two of the study group had history of alcohol abuse, but the clinical picture was typical of schizophrenia. One patient was judged to be mentally retarded.

Other than these three instances, there were no other secondary diagnoses of significance. Though there were no predetermined specified criteria for diagnosis of schizophrenia, there was consistency in that the author was psychiatrist-in-charge and used standardly-acceptable criteria. In general, similar criteria are used as specified in other studies, namely, presence of at least four of the following symptoms: thought disorder, catatonic motor behavior, paranoid ideation, hallucinations, delusions (other than systematized paranoid), blunted or inappropriate emotion, disturbance of social behavior and interpersonal relations.

Clinical records were reviewed and the following data were collected regarding each patient.

1. Pre-discharge Data: age, sex, race, marital status, secondary diagnoses, family income, educational level,number of prior hospitalizations, length of all prior hospitalizations, status regarding public assistance at admission, major role function status at admission, number of days hospitalized, oral or long-acting tranquilizers instituted in hospital, and disposition at discharge.
2. Post-discharge Data: (two years post-discharge): medication history after discharge, length of active follow-up, number of relapses, number of readmissions, status regarding public assistance, and status regarding major role function.

"Public assistance" was defined as any of the following: Social Security disability, Supplemental Security Income, Veterans Administration disability, Aid to Dependent Children, or Old Age Assistance.

The primary outcome to be reported is rehospitalization rate. Relapse rate is also reported separately ("relapse" is defined as clinical deterioration such that psychotic symptoms reappear or exacerbate, and a distinct change in clinical management is evident in the record). Other outcomes have to do with comparative status regarding public assistance and major role function.

Of the 54 study patients, adequate follow-up data were available in 39 cases. Ten of the 15 cases without adequate follow-up data were discharged out of the Center's system upon leaving the IPS (i.e., State Hospital, VA Hospital, Against Medical Advice, left town immediately to return to home elsewhere, etc.); the other five were to be followed

TABLE 5. Comparison Of Readmitted/Not Readmitted Total Follow-Up Group

	R (N=17)	NR (N=22)	
Sex (% Male)	52.9	31.8	(N.S.)
Race (% Black)	23.5	54.3	(N.S.)
Length Previous Hospitalization (% > 1 year)	41.2	21.1	(N.S.)
Failure To Take Medication (%)	70.6	9.1	($p < .001$)
Length of Follow-up (% 13-24 Months)	17.6	77.3	($p < .001$)
Prolixin Begun in Hospital (%)	35.3	68.2	(N.S.) Approached significance at $p < .10$

at the Center, but were lost to follow-up for various reasons.

In addition to analysis of data regarding these 39 cases, another major analysis was performed with a special sub-group - those patients whose disposition at discharge was to be further care at the Center's Day Treatment or Aftercare program. This group was chosen in order to derive more pertinent information concerning the effectiveness of our aftercare system, and to compare results with the NIMH collaborative study.

RESULTS

Table I reveals comparative characteristics of study groups, including the Center's patients and the NIMH study group.

Perusal of the Table indicates a rather good match for the two comparisons. One would look particularly at those variables usually thought to be related to prognosis: sex, educational level, number of "first episode" cases, and distribution of lengths of prior hospitalization. These appear to be very similar for the groups.

Mean length of hospital stay is quite different between the two groups, and represents the expected differences between a general hospital unit and state hospitals. The ready availability of partial hospitalization for our patients helps to bring down the average stay.

Table 2 represents readmission and relapse rates of two center groups and the NIMH study group. The "Total Follow-up Study Group" includes those of our patients with follow-up data available. The "Discharged to Center" notation refers to those patients discharged from the hospital to our Day Treatment or Aftercare Service, and for whom follow-up data were available.

Of the 4l patients discharged to Center services, these data were available for 36 of them. The critical comparison between this group and the Hogarty-Goldberg group reveals relapse rates of 47% and 57%, respectively, a non-significant difference ($\underline{x}^2$ (I) = I.09,N.S.). It should be noted that the figure for Hogarty-Goldberg was derived by combining relapses which they reported in the study's "transition period," in addition to the relapses during controlled conditions. This was done to make the comparisons more valid, and because early readmissions are important clinical events.

It should be noted that Hogarty-Goldberg did not report detailed data regarding *readmissions* but only *relapses*. The 42.7% shown in Table 2 was calculated by applying a "75% of relapses readmitted" factor which was indicated in their report. Since this was a rather casual statement in their report, this datum was used with some caution.

In Tables 3 and 4, data reflecting functioning status of Center patients at the time of index hospitalization and two years later are noted. There appears to be a trend to increased public assistance. "Major Role Function Status" was determined by examining the record to see if the patient was, with respect to role as *wage-earner* or *homemaker,* I) functioning in this role, 2) not functioning and not on disability, or 3) on disability income of some type. It would appear that some of the initial non-functioners either became functional or found themselves on disability status after two years since the "Non Functioning, Not on Disability" group decreased from 40.5% to I2.5%, and each of the other two categories rose in percentage, (percent functioning from 46.8 to 59.3 percent, and percent on disability from I2.5 to 24.9 percent).

We also examined the characteristics of the Readmitted and Not-Readmitted groups, as seen in Table 5. The Table only shows those variables which appeared to possibly discriminate the groups. However, as can be seen, only two variables proved statistically significant: failure to take medication and length of follow-up.

In reviewing the clients' records, evidence of failure to take medication was noted prominently by Center staff whenever it was suspected. This finding was correlated with readmission to hospital ($\underline{x}^2(1)=13.21, \underline{p}<001$). Also, the length of time the client was in our outpatient program was noted.

Out patient therapy covering more than half the study time (I3 to 24 months) was correlated

positively with survival in the community ($\underline{x}^2$ (1) = 11.28, $\underline{p}$<.001). Another variable which approached significance was the use of long-acting injectible fluphenazine (p = <.10).

DISCUSSION

We found essentially similar relapse/rehospitalization rates for our "Discharged to Center" group and the NIMH study group. Further comment and conclusions regarding this comparison will examine the similarities and differences in patient characteristics and treatment procedures. Though the NIMH study applied screening criteria for patient selection, these did not invalidate a comparison for our purposes. The patient populations are sufficiently similar to allow for conclusions, in our opinion.

The outpatient treatment experience of our patients was different in some respects, from the NIMH study patients. Therapy in DTS was used for many of our patients. If one views this as extending the period of hospitalization ("partial hospitalization"), then the "average length of stay"of the two groups would be brought into closer proximity.

Another obvious difference in settings is our use of paraprofessional staff as primary therapists. Master's-level social workers were used by Hogarty-Goldberg. Cost-effectiveness considerations would then lead to the conclusion that our system is superior in this regard.

Comparative community adjustment indices, other than relapse, would be desirable in order to fully evaluate the outcome. Our study is lacking sufficient outcome measures to do this. The NIMH study was replete with a variety of standardized outcome scores. It is the author's opinion that most clinical settings will not be able to capture such time-consuming information, and that we could all profit from a single, generally-accepted, practical adjustment instrument which could be used across settings.

The crude outcome adjustment measures reported here, welfare and major role status, are important data to a community mental health center. Governing boards, public officials, and taxpayers are concerned with the productivity (or lack thereof) engendered by public programs. Our results along these dimensions are merely baserates at this point. We have no way of judging the significance of the data as yet. One may view the increased "public assistance" status at two years as a poor outcome. On the other hand, it may be viewed as positive since disabled persons often need advocates to attain a minimum standard of living. This viewpoint is supported by the "major role status" data at two years. It appears that our staff were able to lead a good number of the "Non-functioning, Not on Disability" group into functioning or disability status. Hopefully, the patients who moved toward disability status were well-selected and not the young, first-episode cases.

One important finding of the Hogarty-Goldberg study was that "sociotherapy" is correlated with improved community adjustment (not relapse rates) after 18-months' outpatient therapy.[3] One may argue that the Master's level social workers employed in that study are necessary to achieve such results, and that paraprofessionals will not do as well. This is a plausible hypothesis, and would need testing with more rigorous design than ours.

The significant findings regarding differences in the Readmitted and Non-Readmitted groups are not surprising. A larger study sample may have shown more variables of significance, particularly the one related to the use of "long-acting fluphenazine". It has been our practice since around 1971 to initiate this mode of chemotherapy in almost all schizophrenic patients who relapse in association with suspected failure to take medication. This is another area which could use well-controlled studies.

Our findings that continuity of care (length of follow-up) and reliable medication-taking are associated with community survival lead to interesting questions regarding systems of care. Would continuity of individual primary therapists lead to reduced readmissions?

In our system, the client is transferred to different therapists in the different service components. Some mental health centers use a team approach whereby the same team follows a patient throughout the system. How does this affect readmission rates for schizophrenics? Glick, et al,[10] speculate that outcomes for schizophrenics may well depend more on the patients' continuing in therapy following discharge than on the nature of inpatient treatment; and that assuring out-patient therapy may be the most important activity of the hospital stay. We have depended largely upon clearly defined treatment goals and plans, uniformity of staff's therapeutic orientation, and program/staff accountability to ensure continuity of care.[8]

CONCLUSION

In summary, we have found that a population of schizophrenic patients at the Huntsville-Madison County Mental Health Center, who are very similar to the study group of the NIMH collaborative study performed by the Hogarty-Goldberg group, have similar relapse/readmission rates. We feel that

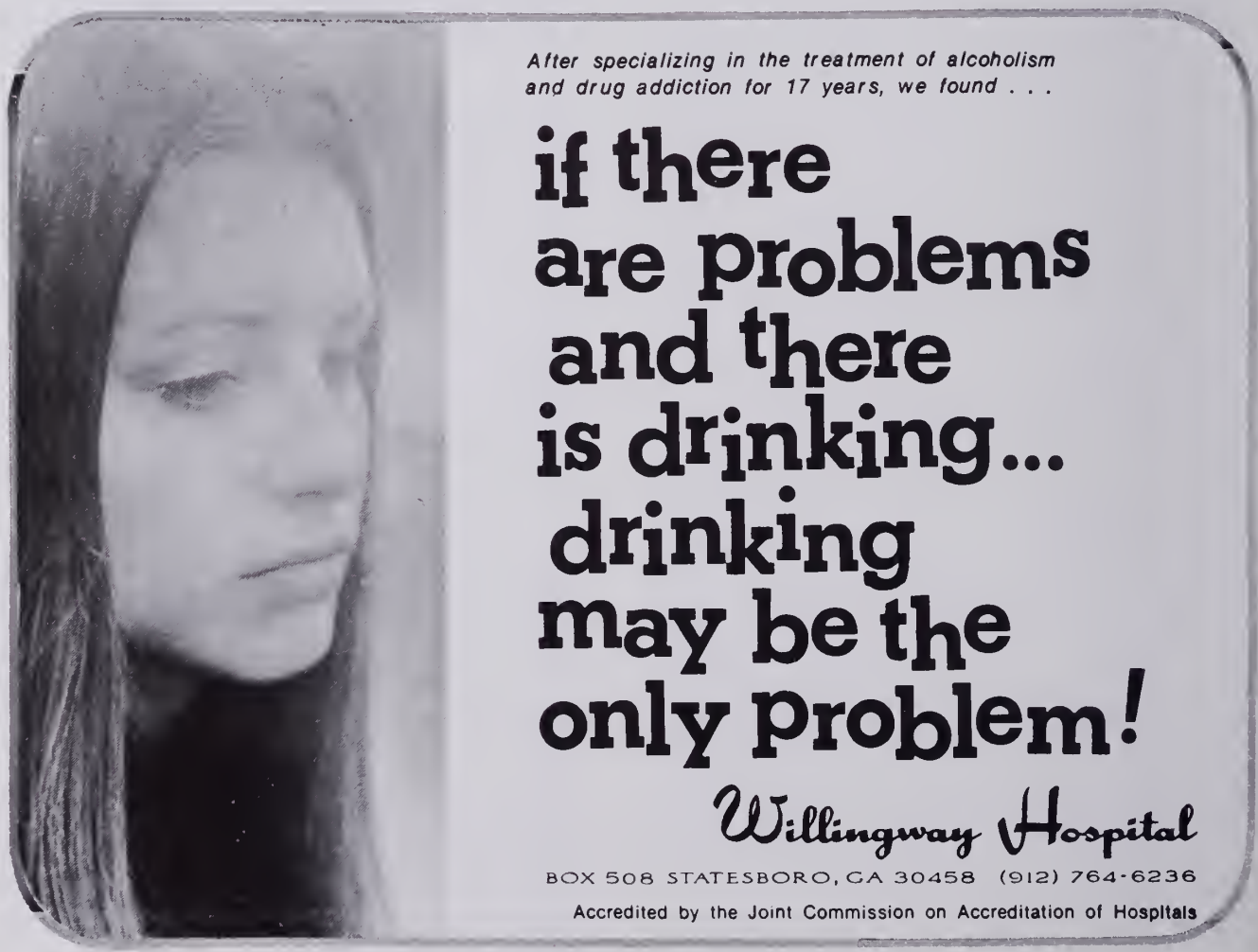
our system offers a cost-effective advantage, because we depend upon paraprofessionals primarily for delivery of aftercare services. We found a tendency for increasing dependency upon public assistance among some of our patients, but also a significant number of patients who improved in role functioning.

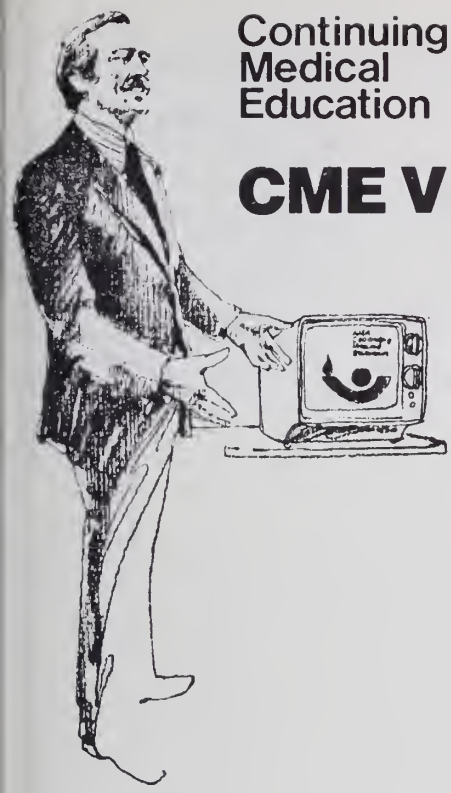
Readmission to hospital is correlated with less outpatient follow-up time and failure to take medication. There is also a trend favoring the use of long-acting fluphenazine for community tenure. It is suggested that future studies focus upon 1) those elements of a system which foster continuity of care, 2) relapse-preventing power of long-acting medication, 3) community adjustment indices in programs using professional versus those using paraprofessional staff as therapists.

The author encourages other clincal settings to conduct follow-up studies such as this in order to detect elements of care which promote good outcomes for schizophrenic patients. □

REFERENCES

1. Hogarty, G.E., Goldberg, S.C.: Drug and sociotherapy in the aftercare of schizophrenic patients: One-year relapse rates. Arch Gen Psychiatry 28:54-64, 1973.
2. Hogarty, G.E., Goldberg, S.C., Schooler, N.R., Ulrich, R.F.: Drug and sociotherapy in the aftercare of schizophrenic patients. II. Two-year relapse rates. Arch Gen Psychiatry 31:603-608.
3. Hogarty, G.E., Goldberg, S.C., Schooler, N.R.: Drug and sociotherapy in the aftercare of schizophrenic patients. III. Adjustment of non-relapsed patients. Arch Gen Psychiatry 31:609-618, 1974.
4. Leff, J.P., Wing, J.K.: Trial of maintenance therapy in schizophrenia. Br Med J 3:599-604, 1971.
5. Hirsch, S.R., Gaind, r., Rohde, P.D., Stevens, B.C., Wing, J.K.: Outpatient maintenance of chronic schizophrenic patients with long-acting fluphenazine: Double-blind placebo trial. Br Med J 1:633-637, 1973.
6. Davis, John M.: Overview: Maintenance therapy in psychiatry. I. Schizophrenia. Am J Psychiatry 132:1237-1245, 1975.
7. Rinn, r.C., Bailey, A., Tapp, L., Howard, J.: A comparison of aftercare programs: Preliminary report. Int J Men Health 3:153-159, 1974.
8. Turner, A.J., Goodson, W.H.: Behavioral technology applied to a community mental health center. J Comm Psychol 5:209-224, 1977.
9. Rinn, R.C., Tapp, L., Petrella, R.: Behavior modification with outpatients in a community mental health center. Behav Th Exper Psychiatry 4:243-247, 1973.
10. Glick, I.D., Hargreaves, W.A., Drues, J., Showstack, J.A.: Short versus long hospitalization: A prospective controlled study. IV. One-year follow-up results for schizophrenic patients. Am J Psychiatry 133:509-514, 1976.





Continuing Medical Education

CME VIDEO CLINICS

By GEORGE D. OETTING, Ed.D.
Director of Education

A new approach in regional CME for MASA members will be introduced in May. The AMA Division of Continuing Medical Studies, the MASA Education Department and the CME directors of many Alabama hospitals and health organizations are combining their efforts to present a series of CME Video Clinics.

These clinics are presented through the medium of color videotape and typically consist of three to six hours of study material, with about two-thirds of the clinic contained in the videotape portion. Each includes:

- VIDEOTAPE — one or more one-hour 3/4 inch U-Matic video cassettes, depending on the program.
- SYLLABUS — A summary of the material presented on the videotapes and other ancillary information.
- TESTS — Pre-tests to alert you to those parts of the clinic that will be most helpful, knowledge-recall tests at intervals throughout the clinic, and patient management problems at the end of the clinic which require the use of the knowledge you gained to diagnose and manage a number of patient problems.

Alabama has been asked by AMA to be as one of two pilot states in the nation to try out and evaluate these programs. The MASA Education Department will provide statewide promotion and coordination to insure that needed educational materials are available. However, the heart of this program will be hospital CME directors at a number of locations around the state. These key people will provide the local leadership, publicity and actual meeting arrangements for the presentations of these programs.

Starting in May, the first of these Video Clinics on "Back Ache" will be presented simultaneously at various hospital locations around the state. (Locations will be publicized in *The Alabama M.D.*) The educational materials will then be moved on to other hospital sites, so that in a one-or-two month period, MASA members in all regions of the state will have a nearby opportunity to participate in the program.

The educational materials used in this "Back Ache" Clinic were previewed at the recent statewide meeting of CME officials. Response was very favorable — particularly to the 100 page study syllabus which was almost one inch thick and contained much useful reference material.

This particular program (worth 4 hours of Category 1 CME) was prepared by Edgar G. Dawson, M.D., University of California at Los Angeles School of Medicine, Division of Orthopaedic Surgery. His presentation focuses on the anatomy and biomechanics of the spine, causes of backache, physician examination, diagnostic testing and treatment procedures. A pre-test, three quizzes and patient management problems will challenge you as you progress in the course.

The Video Clinic topics already developed should be of interest to physicians in many specialties; programs scheduled for later presentation in Alabama include vulvo-vaginal infections, arthritis diagnosis and management principles, fundamentals of acid-base, fluid, and electrolyte management and medical risk management. All are approved for Category 1 credit.

The cost of these programs is relatively low; each participant pays $5 per credit hour for AMA members. The hospitals presenting the program also pay a small rental fee for the tapes.

As these programs get going in the state, we would appreciate your comments and suggestions on their value. We feel they can become an excellent complement to our live AMA and MASA sponsored regional CME programs. Their success will depend upon your active support.

AUXILIARY



Mrs. John S. Taylor
President

Focusing upon "Health Through Education" this past year, the auxiliary to the Medical Association of the State of Alabama endeavored through county, state, and national projects to promote the concept that a strong medical association and auxiliary, united in a common cause, will ultimately improve the health and quality of life for every individual in our communities.

As a result of our close working relationship with MASA officers, advisors, and staff, it is with sincere pleasure that we relate joint efforts of all our committees and counties to promote health through education.

At the 1977 AMA Auxiliary Convention, Dr. John B. Rice, Jr. and Mr. Lon Conner were auxiliary luncheon guests to hear Dr. Albert Sabin and Dr. Richard Palmer. Dr. Sabin discussed the state of immunization in our country and offered his solutions to these problems. Dr. Richard Palmer outlined the AMA and auxiliary's joint immunization awareness campaign.

As a result of MASA's expressed interest in AMASA's participation in this timely project, our Community Health chairman and committee publicized this statewide.

Also at convention, Alabama shared with Washington, national recognition for the greatest increase in membership in the entire United States. This included a record breaking total of 1805 members with 17 members at large. Thirty-three counties are organized into 30 auxiliaries, ranging in size from four to over 500; with six of these having 100 percent membership.

The auxiliary's American Medical Association Education-Research Foundation fund raising activities nationwide netted medical education over one and one half million dollars. Alabama's largest auxiliary, Jefferson - Birmingham, with over $16,000 in donations, received the county achievement award for the second straight year. State totals surpassed $36,000 and sizable checks to support medical education will be presented to the deans of Alabama's two medical schools.

Several county auxiliaries made over $4500 from the Sharing Christmas cards. Everything from auctions to tasting teas to memorials has totaled about $20,000 so far this year.

The "Camille Gilbert Johnson Nursing Award" was dedicated by her County auxiliary in memory of our AMA-ERF Chairman, whose untimely death saddened us all.

In September, County Auxilians, though busy assisting in school health services journeyed to Montgomery for our Fall Conference, "Health Through Education." MASA President, Dr. John Rice, opened proceedings with the presentation "A Member of the Club," a provocative study of medical marriage and family stresses.

In the conference room at Association headquarters, Health Education in Alabama schools was highlighted as our top-priority objective. Auxiliary leaders enthusiastically heard educators including State Superintendent Wayne Teague, and Health Educator, Mabel Robinson, giving advice on how to achieve this goal. Members of the MASA Legislative and communications staff advised us about effective legislation efforts for promoting a health education bill. News was then revealed that a health education TV spot, "What in Health Do Your Schools Teach" would be developed by Amerson Associates for MASA to aid the Auxiliary in the ongoing quest for comprehensive health education in our schools.

Our ALA-PAC and legislation committees encouraged participation in the PAR program, the visit to Washington to meet our Congressmen, and secured pledges to join ALA-PAC.

Six county president-elects and the state president-elect attended the AMA Auxiliary Confluence last October. Our future auxiliary leaders attended leadership seminars and heard experts on such topics as "Impaired Physicians," "On Being A Woman," "The Family Unit - Shifting Values." They shared this information at our Winter Board meeting.

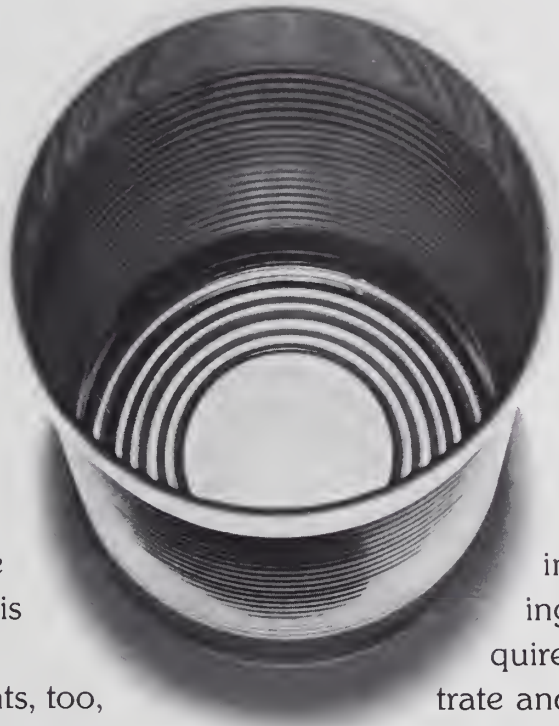
Four district Health Through Education Action Seminars were co-sponsored by the Auxiliary, State Department of Education and Alabama Congress of Parents and Teachers, November 28 - December 1, 1977.

Even with all the activities to promote "Health Through Education," county auxiliaries dedicate one day a year to show esteem for physicians. Everything from barbecues to medical education donations honor Doctor's Day in March.

The 1978 AMASA Convention has been condensed to accommodate busy schedules. Madison County convention chairmen and committees are working hard to coordinate MASA and AMASA activities.

We thank you for your support. We have had a memorable year and are proud to be your partners in health. ☐

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A two-piece can means no soldered seam. No solder means no possibility of lead contamination from the container. Soyalac is the first infant formula with this packaging innovation.

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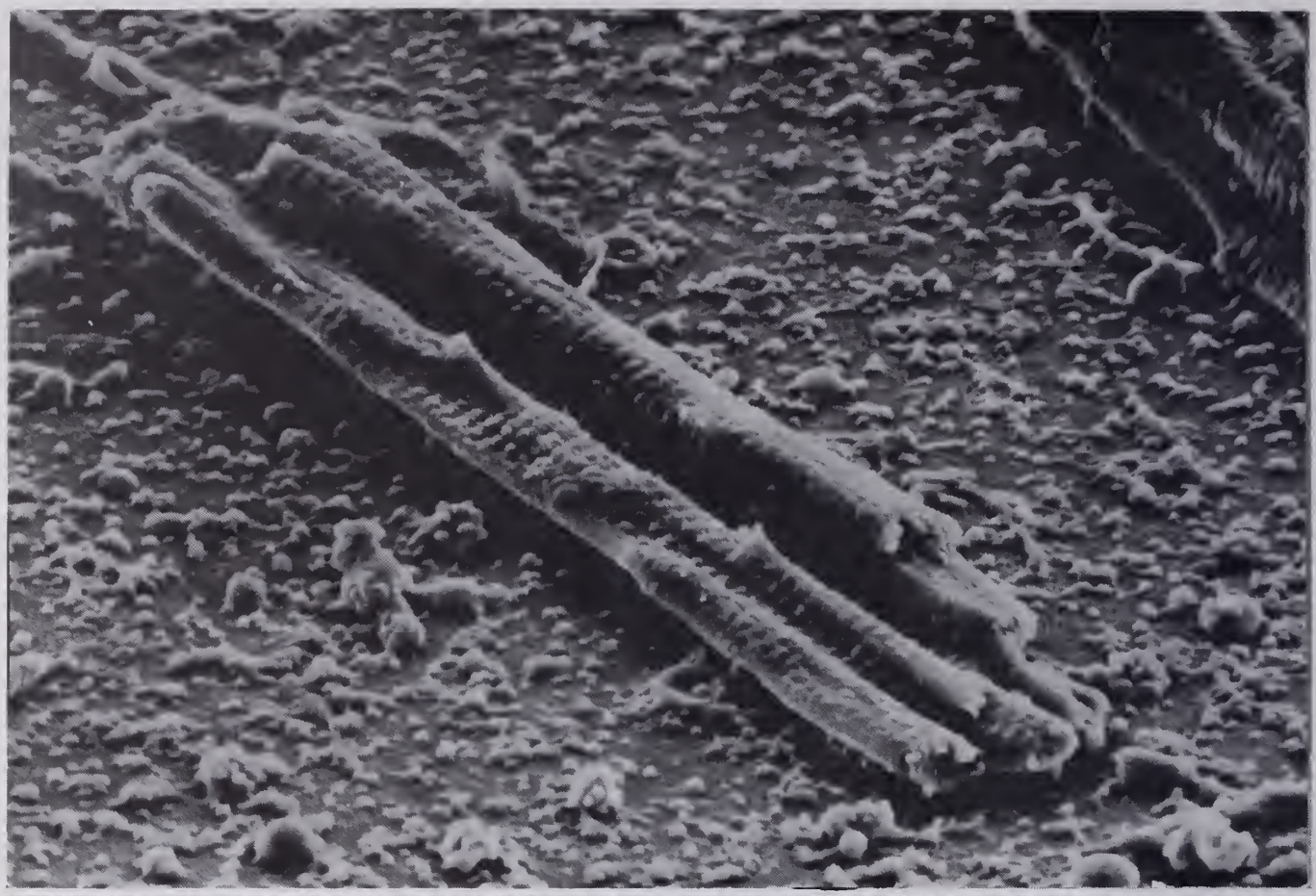


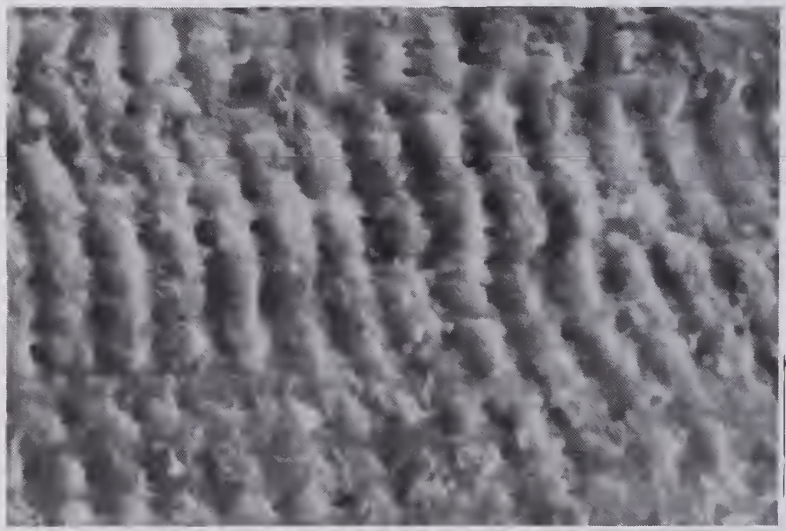
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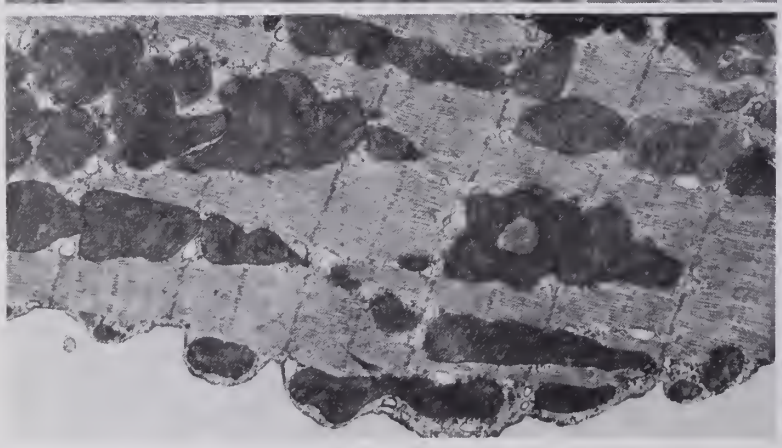
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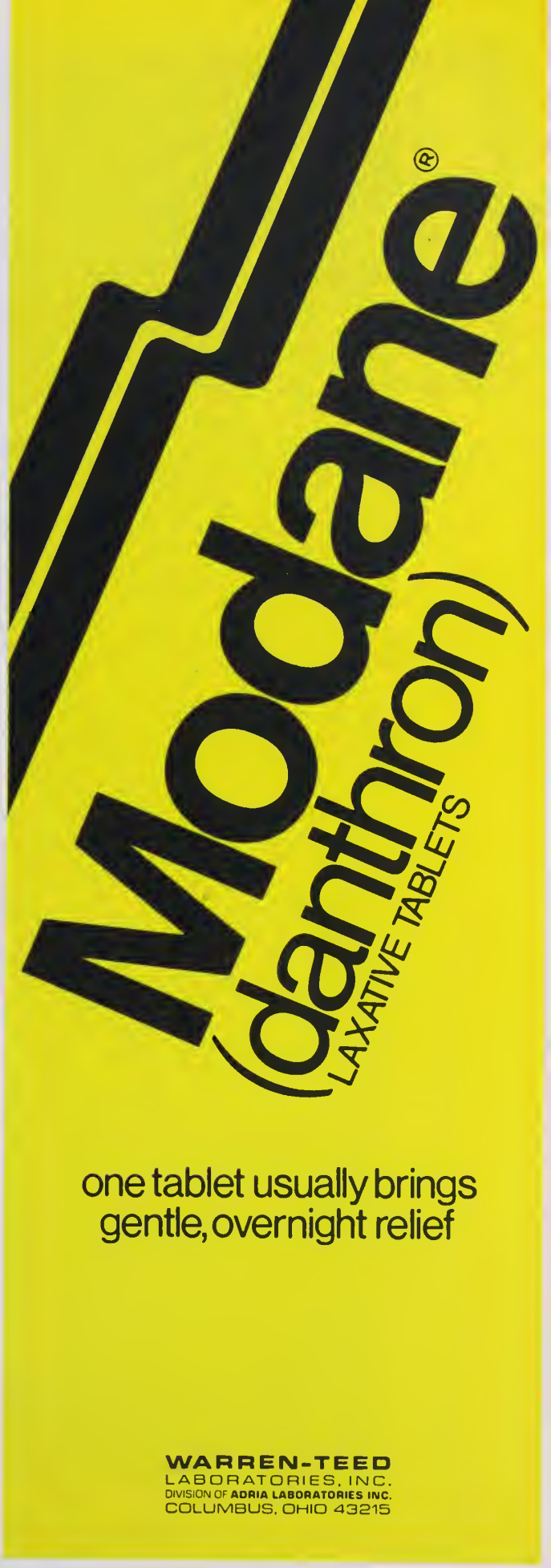
The Small, Small World Of Electron Microscopy

CONTINUED FROM PAGE 10

1) The Scanning Electron Microscope sees an isolated heart muscle from a normal rat. The doughnut shapes are red blood cells. 2) A closer SCEM view of the T-tubules at x7,000. 3) The same area as viewed with the Transmission Electron Microscope at x11,000, showing the T-tubules of the isolated heart muscle cell, Z-bands and M-bands, mitochondria and sarcomere, in Dr. Bishop's description. 4) Right ventricle of a dog with experimentally produced pulmonary artery stenosis and right ventricular hypertrophy, as described by Dr. Bishop. There are dense expansions of Z-band material found only in animals and man with developing cardiac hypertrophy, according to Dr. Bishop. □

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DON'T BE DECEIVED BY A DRUG ADDICT

By LARRY ABBOTT
Reprinted from the AMA NEWS

Some doctors are unknowingly contributing to the growing problem of drug abuse in this country.

I say this because I myself was a drug addict, and for several years physicians were my main source of drugs. Like a lot of other addicts I know, I obtained drugs by defrauding doctors. (Addicts call it "making a doctor" — that is, obtaining a drug prescription by fraud.)

I am writing this with the hope that I can give doctors some tips on how to spot an addict from among patients who come in with symptoms calling for drugs that tend to be abused.

At present I am serving a 10-year sentence at the Kirkland Correctional Institution of the South Carolina Dept. of Corrections in Columbia. I was sentenced in April of last year, and I will be eligible for parole after serving three years and four months. Drugs have caused my family and me plenty of headaches. As a result I have no desire ever to abuse drugs again.

Since I have been such a nuisance to doctors, it is only right that I should try to make up for it. I think the best way I can do this is to list the drugs that addicts try to get from physicians, suggest how to deal with a new patient who is asking for narcotics, and explain some of the approaches and excuses addicts use.

Of all the narcotics, Demerol seems to be one of the most popular and most widely used, especially by the younger addicts. The older abusers tend to favor morphine, Dilaudid, Pantopon, and Percodan. Except for Percodan, these drugs are harder for the less-experienced, younger addicts to obtain.

Addicts also try to get hold of paregoric. One of the most widely used excuses is to complain of diarrhea. Another good one is claim that your child is cutting teeth and is restless and in pain—"I've tried paregoric before with the child and it worked fine." It is simple to extract the opium from paregoric. One ounce will yield about one-fourth grain of opium.

The Actors

A drug addict gets to be very good at fooling doctors. One of the oldest and most successful approaches is to pretend you have kidney stones.

If acted out right, this can be very convincing. For example, I would go into a doctor's office complaining of pains in my left side, the pain shooting down into my groin and originating from my back on the left side. I used my left side to avoid having my "ailment" mistaken for appendicitis, which would require hospitalization.

I would also tell the doctor that it burned when I passed water and that I'd had stones before and passed them while at home. If he suggested that I be put in the hospital, I would say that I had just gotten medical insurance in a group policy, but that the policy wouldn't be effective for about two weeks, and I wanted to try to hang on until then.

When asked for a urine specimen, I would pass just enough water in the cup or vessel. Then I'd stick my fingertip with a needle and drop in enough blood to barely darken the color of the urine. After the doctor had diagnosed my illness as probably due to kidney stones, I'd volunteer the information—if he didn't ask for it—that I am allergic to codeine and Talwin.

Both these drugs will ease the pain of drug withdrawal, but more potent drugs produce a more desirable effect. Since I would say I was allergic to codeine and Talwin, that would leave only a few other drugs a doctor could prescribe to relieve the distress from kidney stones.

If I didn't think the doctor would prescribe one of the strongest drugs (such as morphine or Dilaudid), I'd tell him that on another occasion I'd taken a pain medication that worked fine, one that had a codeine substitute in it (I'd be angling for Percodan). I would either describe what the medication looked like or give him its name.

No Repeats

I rarely went back to the same doctor more than two or three times. I'd still make use of him, however, by getting other addicts or friends to go to him. Then we'd divide the dope. The others would pay all the expenses because I was furnishing them with a new source. Then they would do the same thing with their friends. So a doctor should watch out for a series of new patients, all complaining of similar illnesses, like kidney stones.

Don't let age or appearance fool you. Addicts are of all races, ages, and both sexes. I know of a man that has been abusing drugs since 1914. He still "makes" doctors every day. He lives with a man and a woman who are also addicts. These two are in their 50s. The three of them have been in prison several times for drug-related offenses.

Sometimes you can spot an addict pretty easily. When you are examining a new patient who complains of pain, be on the lookout for the usual signs of drug use—the excessive yawning, sneezing, and nervousness of withdrawal, or the "pinpoint" pupils, the nose that is red from scratching or rubbing, the unusual thirst and, sometimes, slurred speech of a person who is "high."

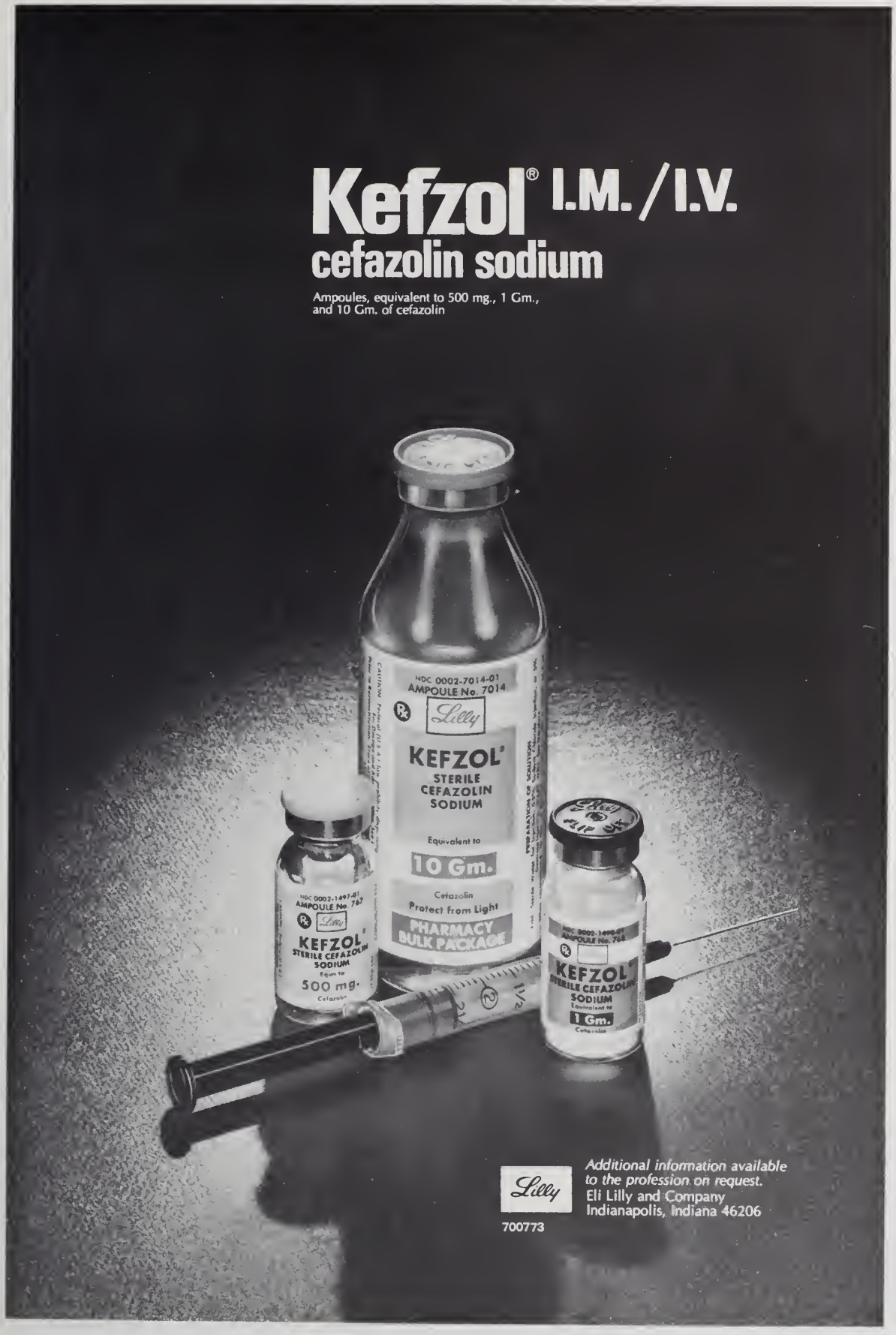
If you can, ask the patient to remove his or her shirt. Then examine the backs of the arms, the shoulders,

CONTINUED ON PAGE 38

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Ampoules, equivalent to 500 mg., 1 Gm., and 10 Gm. of cefazolin



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CONTINUED FROM PAGE 36

DON'T BE DECEIVED BY A DRUG ADDICT

the forearms, and the wrists for needle marks. Also, directly after taking a specimen of urine, examine the fingers for puncture marks, squeezing each fingertip in turn. Usually, a recent puncture will bleed again. If not, old marks will show. Occasionally, a patient will sneak in a prepared urine specimen in his pocket, but this is the exception.

When you're examining the ankles for the swelling that occurs with kidney stones, look for more needle marks. Many addicts keep a needle—or whatever they use for sticking their finger—in their sock. One time a doctor discovered a needle and syringe in my sock in this way.

Desperate Men

Addicts are desperate. They are always thinking of new ways to feed their habit and will do almost anything to get hold of the drugs they need. For this reason, if you find it necessary to give a patient medication for pain, never let him see where you keep the drug.

If an addict knows that there are drugs in an office, and has learned where they are, it will be a big temptation for him to break in later. Once that happens, a physician can expect a lot more break-ins, not only by the first person, but by others as well, for drug addicts have a kind of grapevine operation about good sources of supply.

When addicts are together, they're always trading tips on what doctors they've "made," what a particular doctor prescribed, how "easy" he was, and what drugs they noticed in his office.

Doctors' cars, usually with special insignia, are easy to identify. Some physicians have a bad habit of leaving their bag in plain view on the seat or floorboard of their cars. This can result in loss of the bag, and usually a broken window. An addict who steals a doctor's bag may be encouraged to break into his office. The addict will figure that if there is a small amount of drugs in the bag, there will be a larger quantity somewhere in the office.

A prescription pad left out in the open is another temptation that an

CONTINUED ON PAGE 41

Brief Summary of Prescribing Information
Combined TEGOPEN® (cloxacillin sodium)
Capsules and Oral Solution
For complete information, consult Official Package Circular. (12) TEGOPEN 9/11/75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

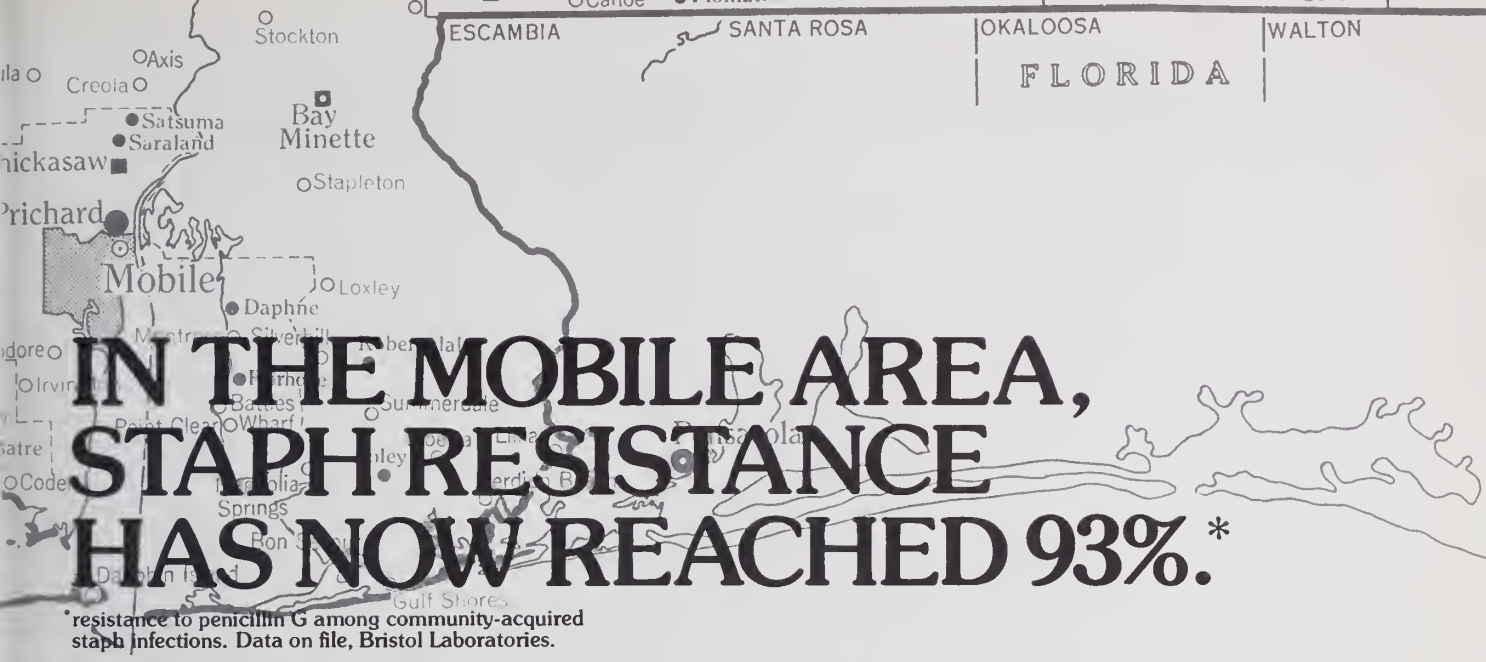
Usual Dosage: Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

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IN THE MOBILE AREA, STAPH RESISTANCE HAS NOW REACHED 93%.*

*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

WHEN YOU CAN'T RULE OUT STAPH, CONSIDER

TEGOPEN®
(cloxacillin sodium)

..."THE PENICILLIN OF TODAY"

- Effective against nonpenicillinase-producing staphylococci, beta-hemolytic streptococci, and pneumococci.†

†NOTE: The choice of Tegopen should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates that the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semisynthetic penicillin. The clinical significance of *in vitro* data is unknown.

- 10 times more active against strep than staph.
- Well absorbed from the G.I. tract.‡

‡Maximum absorption occurs when Tegopen is taken on an empty stomach, preferably 1-2 hrs. before meals.



Please see brief summary for prescribing information.

PHYSICIANS' PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE: Age 28; University of Texas, 1975; American Board eligible 1978; National Board; Available July 1, 1978. LW-004.

GENERAL PRACTICE, PUBLIC HEALTH: Age 36; Univ. of Kentucky 1969; National Board; seeking practice in public health, school health, academic, research. Available June 1978. LW-11154

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; University of Virginia, 1973; National Board Certified; American Board Certified; will be American Board Eligible 1978; seeking single specialty group or partnership. Available July 1978. LW-08695.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; LSU School of Medicine, 1971; American Board Certified; will be American Board Eligible 1978; seeking single specialty group, multi-specialty or partnership. Available July 1978. LW-10561.

GENERAL PRACTICE EMERGENCY ROOM: Age 26; Creighton University, 1976; seeking practice in the Birmingham area or within a 20-mile radius. Available July 1978. LW-100.

INTERNAL MEDICINE: Age 31; University of Florida, 1972; American Board certified; National Board; seeking single specialty group in town of 25,000-100,000 population in the central or northern section of Alabama. Available July 1, 1978. LW-008.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; seeking practice in general internal medicine with a small group, preferably a small city rural surroundings. Available July 1978. LW-019. (See LW-018.)

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERNAL MEDICINE: Age 30; Medical College of Virginia, 1973; Presently in the army completing a two year obligation, (wife is also a Board eligible Internist and is presently completing an infectious disease fellowship.) Wish to join a small group in general internal medicine preferably a small city with rural surroundings. Available August 1978. LW-018. (See LW-019.)

OPHTHALMOLOGY: Age 33; University of Alabama, 1971; American Board Certified; seeking private, partnership or group, industrial or institutional preferably in the Mobile area with a population of 25,000 or more. Available July 1978. LW-200.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

ORTHOPEDIC SURGEON: Age 45; University of Mississippi 1961; American Board certified; seeking practice in medium or large city. Available July 1978. LW-700

ORTHOPEDIC SURGEON: Age 31; Med. College of Georgia 1972; seeking practice in town of 50,000 plus population. Available August 1979. LW-701

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PEDIATRICS: Age 27; University of Texas Southwestern, 1975; National Board Certified; seeking partnership, single specialty group or solo. Available July 1978. LW-10873.

SURGEON, GENERAL/FAMILY PRACTICE: Age 32; Univ. of Mississippi 1973; will be American Board eligible in 1978 in General Surgery; seeking single specialty or multi-specialty group or partnership. Available October 1978. LW-08593

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400

UROLOGY: Age 30; Yale Univ. 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

PHYSICIANS WANTED (Opportunities for Practice)

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and larger cities contains a progressive 74 bed hospital. Ample opportunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17.

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital provileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

GENERAL PRACTITIONER Wanted—Town of 6,000 population trade area of 11,000 population, located in East Central Alabama. Hospital located 10 miles away. Metropolitan center located 35 miles distance. Office space located in Clinic building owned by the City, available for lease, or lease purchase. Attractive housing available. One physician in the town. Industrial area. Sixteen churches, 4 schools. Social activities include golf course, country clubs, tennis courts. PW-7.

INTERNIST—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with new 6 bed intensive care unit. 8 member medical staff. Located within 15 minutes of 2 of Alabama's finest lakes. Invitation to visit with expenses paid will be directed to those qualified. PW-11.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted in central Alabama town with population of 4500 near large city. Newly expanded 69 bed hospital with an active 8 member medical staff. Invitation to visit with expenses paid will be directed to those qualified. PW-10.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PRACTICE OPPORTUNITIES for family practitioners, general surgeon, OB-GYN, orthopedic surgeon in progressive community of 10,000 with service area of 40,000, in Northwest Alabama with good schools, housing and recreation. Attractive relocation and income guarantees. PW-25. →

DIGEST—STATE COMMITTEE OF PUBLIC HEALTH

The following actions were taken by the State Committee of Public Health at its meeting on March 15, 1978:

- Confirmed the appointment of Registrars and Deputy Registrars in the following counties: Houston, Jefferson, Lauderdale, Macon, Limestone and Montgomery.
- Approved legal notice to three physicians with delinquent death certificates to complete the certificates within the month before invoking the statutory requirements and penalties.
- Considered recommendations to complete delinquent birth certificates from Huntsville Hospital.
- Was advised of the opening of oyster beds at 6 a.m. on Feb. 23, 1978.
- Approved bacterial standards for opening and closing Alabama's oyster growing waters utilizing the fecal coliform standard method which is more specific and responsive.
- Concurred in the action of the State Health Officer redefining closed area limits for the oyster beds utilizing current information regarding effluent outlets. These new areas are redefined effective 6 a.m. April 1, 1978.
- Approved a plan making Juvenile Diabetes a reportable disease to be reported directly to the University of Alabama Diabetes Hospital. This reporting is to be for a five-year period and will be done on forms prepared by the University, approved by the State Committee of Public Health and subject to annual review.
- Received information regarding the financial crisis expected by the State and County Health Departments effective Oct. 1, 1978, unless additional funds are obtained from present Legislative proposals currently pending.
- Noted the support of this need for funds from the County Commissioners Association by unanimous resolution.
- Noted that the State Health Department has received a one-year extension of the Conditional Designation as the Alabama State Health Planning and Development Agency from DHEW.
- Took note of the review of Rural Health Clinics as suppliers of services to beneficiaries of Medicare and Medicaid and the requirements to comply with state, federal and local laws.
- Was advised that the one-bed contract with the Board of Corrections in a security area for the treatment of recalcitrant tuberculosis has been approved and was advised that all recalcitrant tuberculosis patients are currently under treatment.
- Approved editorial changes to the Dentistry Section of the Health Manpower Plan.
- Noted the support of the Association of State and Territorial Dental Directors for fluoridation of water and noted the action of the Montgomery City Council in unanimously adopting its ordinance providing for the fluoridation of the City's water supply.
- Noted the progress in the Alabama Immunization Initiative reaching nine counties already and planning to reach a total of 30 counties by the end of this school year. ☐

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

DON'T BE DECIEVED BY A DRUG ADDICT

CONTINUED FROM PAGE 38

addict may find hard to pass up since most can write a prescription as well as a doctor. And when a doctor writes a prescription, he should use both the numerical and written-out form of the amount, so that the patient will find it harder to alter the quantity. For example, if he says "twelve" it will prevent anyone's changing the "12" to "42."

An addict approaches a dentist in the same way as he does a physician, maybe asking for an antibiotic and some pain medicine to tide him over. He'll say he's from out of town (addicts trying to make doctors and dentists tend to be "from out of town") and has an appointment with a dentist in his home town to have some root canal work done, but that isn't until next week, and he forgot to bring with him the medications that the hometown dentist supplied.

If an addict really does have an abscessed tooth, he makes full use of it. He goes from dentist to dentist asking for pain medicine and antibiotics, visiting doctor's offices and hospitals as well. Most dentists and physicians will give a narcotic when they see swollen, red gums.

Addicts are forever contracting abscesses of all types and that just provides another excuse to get drugs, going from doctor to doctor. Believe it or not, most addicts try to prevent doctors from healing an abscess until it gets too painful to bear. I have done this myself. (Dentists and physicians seem to respect each other's opinions and if an addict "from out of town" tells a convincing story, some never bother to check it out. They should.)

Addicts live for the present. They don't worry about the future. If they can think of a way to get drugs now, they don't wait until a better time. They're always looking for a gimmick.

A friend of mine has porphyria of the acute intermittent type. I think it is hard to diagnose and that a physician has to send a urine specimen away somewhere to be analyzed, which takes time. Several of my friends and I myself have gone to doctors, claiming to have the disease.

We would complain of severe pains in the stomach and abdomen and would have no trouble getting a large supply of Demerol. I've been told the disease is terminal, so I guess this is why doctors prescribe such large quantities of the drug. Most doctors seem to use Demerol as the pain medicine of choice for this disease.

There are many more gimmicks drug abusers use, but I hope that this will show you a little about how an addict works and thinkgs. The point is that a drug addict will take advantage of you as long as you let him. When you discourage a few of them by not falling for their games, you will be known within drug circles as a "doctor who won't write" (prescriptions for pain killers), and so other addicts will leave you alone.

Then, even if you unknowingly write for a drug abuser who has fooled you, he will tell others how hard it was, and that will stop them from bothering you.

I hope this information helps, and I would just like to say again that I'm sorry for all the trouble that I've caused in the past. ☐

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FOR RENT

MEDICAL OFFICE for lease in Tuscaloosa, with or without equipment. Building is 1½ years old, 1650 square feet, four examination rooms, large reception room; one unit of four-office complex; two medical offices, two dental offices. Fully equipped, if desired, for instant practice; equipment purchase optional. Ten blocks from Druid City Hospital. Separate equipment sale negotiable. Inventory available. Contact: Paul D. Nelson, D.M.D., 601-A Hargrove Road East, Tuscaloosa. Phone (205) 345-7134.

OFFICE SPACE FOR RENT: Mobile Medical Center, Inc., 1720 Springhill Avenue, Mobile, Alabama, has available office space for rent. There are also a limited number of condominium offices for sale. Phone Mr. Loftin, 433-2551 or Mrs. Nichols, 432-2407.

BEACH HOUSE TOWNHOUSE on the beach at Gulf Shores, Alabama. Pool/minutes from three golf courses/all furnishings included/two bedrooms/1½ baths/built-in kitchen/2 car carport/private deck. APRIL & SEPTEMBER—$40.00 per day (3 day minimum); MAY 1-LABOR DAY—$50.00 per day (1 week minimum). CALL FOR RESERVATIONS—AC205/269-4094 or 281-3102.

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WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to $40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

POSITIONS AVAILABLE

ALABAMA: Emergency Physician: Full time, $70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

OFFICE FURNITURE & EQUIPMENT

NEEDED: waiting room furniture, business equipment, examining table, etc. Jefferson, Montgomery, Mobile, Huntsville county areas. Contact: 871-0505, Birmingham.

FOR SALE: OFFICE EQUIPMENT—Ritter combination hydraulic table, Unimeter 250 plus unimeter coagulameter, white metal exam table and treatment room set, Hamilton oak exam room set, 8-in. round auto-clave, assorted surgical instruments and speculums for ob-gyn practice, secretary desk, Whirlpool refrigerator with freezer compartment, other miscellaneous office items. Montgomery area. Contact: Box A; P.O. Box 1900-C, Montgomery, Alabama 36104.

USE THIS SPACE TO ADVERTISE PHYSICIAN OPPORTUNITIES, SITUATIONS WANTED, PRACTICES, OFFICES, REAL ESTATE, EQUIPMENT, ETC.

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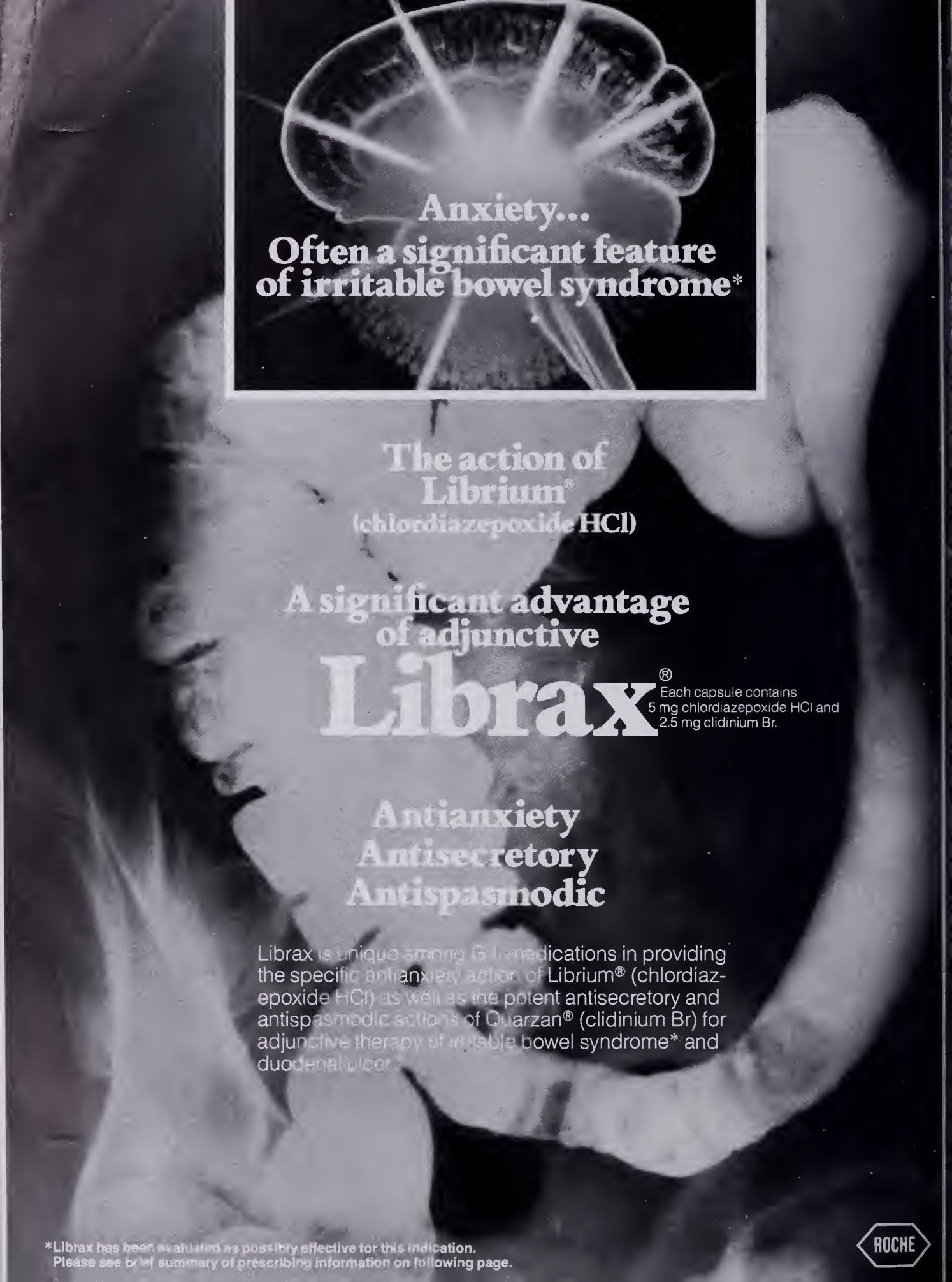
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Hiliary H. Henderson, Jr., M.D.


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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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JOURNAL

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FROM THE EXECUTIVE DIRECTOR

Huntsville 1978

It would be presumptuous to suggest that the 117th annual session of MASA in Huntsville in April was the best ever, since no one now living remembers those back in the last century.

The best one, in the thinking of those of us here in Montgomery, is always the next one. Birmingham in 1979 will be the best until it is succeeded by Montgomery in 1980, and so on, *ad infinitum.*

Staff members can do no less than physicians do in believing that however good the present is or the past was, the future will be better, if only because it was always thus.

To that end, we have already held our first staff meeting on the 1979 annual session, ironing out a few wrinkles discovered in Huntsville.

But this issue of the *Journal* has been expanded to record some of the flavor of Huntsville 1978. We hope you will forgive the liberties taken with a medical journal in making it largely a picture magazine for this issue.

A picture may not always be worth more than 1,000 words, but a collection of pictures might.

It is intended as a bonus for those who made it to Huntsville and an enticement for them and others to plan now to attend the 118th annual session in Birmingham next April.

Lon

S. Lon Conner

PICTURE CREDITS—Cover and annual session, Wm. H. McDonald, MASA, with Robert Phaturos, State Health Department.

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1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

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Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, nor on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

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Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

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For complete prescribing information please see package insert or PDR.



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The AMA Computer Systems in Medicine Consultative Services Program

The American Medical Association recognizes the potential that computers have in the health care setting. Therefore, the AMA has initiated the **Computer Systems in Medicine Consultative Services Program.** Through this program, physicians who are considering computer services as well as current users who want to improve or expand their computer applications can obtain an objective viewpoint and expertise in methods and equipment.

Computers have the potential to be a tremendous asset to the medical community, and have possible application in some or all of the following:

- Improving patient care
- Creating more accessible medical records
- Improving financial management and control
- Reducing the rate of increasing costs
- Improving facility and personnel utilization

The **Consultative Services Program** has established expertise extending from general decision-making on the utilization of computers in medicine to detailed systems design, programming and implementation of systems. The Program's activities include: needs analysis; alternatives development; specifications development; proposal evaluation; and systems audits.

While the major thrust of the **Consultative Services Program** will result from interest in the use of computers or computer-related services, the primary goal of the consultant is to recommend the most advantageous treatment of each situation. **The focus is the needs and objectives of the client,** not the promotion of computerized solutions.

For a more detailed description of this new and valuable service or to arrange a consultative visit, contact: John A. Guerrieri, Jr., Program Director, Consultative Services Program, at (312) 751-6417.



The 1978 Session In Retrospect

The annual session in Huntsville in April was well attended and thoroughly enjoyed. The most important happenings and actions, it seems to me, were these:

- Every facit of organized medicine, from the AMA to the local level, was represented on the orientation program for new members. We were honored to have with us the distinguished AMA President John H. Budd, M.D.
- In order to continue the greatly expanded services of the Association, dues were increased, without dissent, from $125 to $175 a year, effective Jan. 1, 1979.
- Association Bylaws were changed to read: the Vice President cannot succeed himself; a physician may be a voting member of only one component society (although he may be a non-voting, social member of others if their Bylaws permit); medical students may become affiliate members of the Board of Censors at the sessions of the AMA House of Delegates.

(A revised Constitution will be mailed, later this year, to all members.)

- The 1976 position of the Association on National Health Insurance was reaffirmed in substance, to the effect that, while NHI is undesirable, the plan deemed least offensive is the one sponsored by AMA.
- Our AMA delegates were instructed to use their judgment in carrying out this directive and also in the matter of 48 controversial recommendations offered late in 1977 by the National Commission on the Cost of Health Care. These recommendations, one by one, will be before the House of Delegates in St. Louis in June.
- By what appeared to have been general acclaim, the annual Awards Dinner in Huntsville was the best yet, thanks in great part to the slide presentation of scenes from the lives of the 50-year doctors who were honored.

A personal note: As President, I want to know what practicing physicians think, what they want done. Contact me. I consider myself your representative.

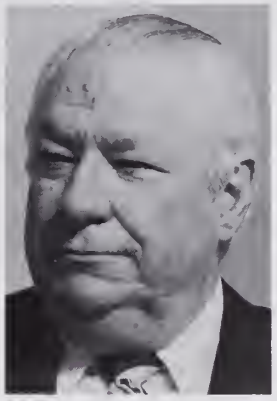
Hiliary H. Henderson, Jr., M.D.
President



ANNUAL SESSION
1978

The April annual session of MASA in Huntsville was acclaimed as high successful — whether judged from the standpoint of the scientific sessions, the business conducted, the pleasant Awards Dinner, ALAPAC's wine tasting party, or any other point of view. It was a compatible mix of hard work and fun, some of which we have attempted to preserve in this expanded issue of few words and many pictures. The May 1978 Journal may be thus regarded as a souvenir of this year's annual session and an invitation to next year's in Birmingham. Unfortunately, the photographers couldn't capture everyone, but we hope the results printed here at least give an honest reflection of the mood.

MASA's new President, Hiliary H. Henderson, Jr., M.D., is a pleasant man of few words. He has the experienced surgeon's direct action approach to problems. He doesn't cotton to gobbledygook, buzz words, circumlocution or the sound of people who like to hear themselves talk.



He can be persuaded of an opinion opposite to the one he holds, but it must be cogent, simply stated and logical. He has announced that as President he is available to working physicians for their comments on what they want done.

"If they convince me their ideas are right, I'll go along with them," Dr. Henderson says. "If they don't, I won't."

That laconic style may have had its roots in the early association with another man who had to get things done with a minimum of fuss and falderol — the late Hiliary H. Henderson Sr., M.D., who practiced in Butler County where Hiliary Jr. was born in 1912.

Young Hiliary was probably fated from birth to be a physician himself but what finally clinched his calling was some experience in his teens with the kind of heavy manual labor that may have been the only alternative to medicine. In any event, he was off to the University of Alabama in the early 1930s, graduating in 1934. His M.D. came four years later from Tulane.

He interned and did part of his residency in surgery at Hillman Hospital, Birmingham, completing his residency at Lloyd Noland, Fairfield, where he remained in various capacities, including Assistant Chief Surgeon, until New Year's Eve 1945.

On Jan. 1, 1946, he opened his office as a general surgeon in private practice, a listing he still has, although he has served as Chief of Surgical Services for Children's Hospital, Associate Professor of Surgery at the Medical Center and still maintains his directorship of medical services for U.S. Pipe, Birmingham.

Before he permitted his name to be put in nomination for the presidency of MASA, Dr. Henderson had a complete physical, which found him fit except for a tendency to overweight, a problem he is working on. Dr. Henderson rarely indulges his fancy for a good cigar and cares little for other indulgences either.

He has three sons by his first wife of 31 years, who died in 1973. Later, he met the present Mrs. Henderson, the former June Massey Wood, whose dentist husband had died suddenly on a tennis court. They dated for a time and were married in 1975.

While Dr. Henderson was practicing surgery, he now admits with a tinge of regret, he had little time for his sons (a fourth died at 6 of leukemia). "I would come home late at night after they were in bed, then leave in the morning before they got up. I never got to see them."

Now he is getting to know them better, and enjoys the long delayed role of father. He has restricted his surgical practice, the better to serve MASA, and solicits the suggestions, ideas and recommendations of practicing physicians.

Tip: Keep it short, to the point, and be sure your ideas are well grounded in fact. That done, you will have an attentive listener in Dr. Henderson.—W.H.M.





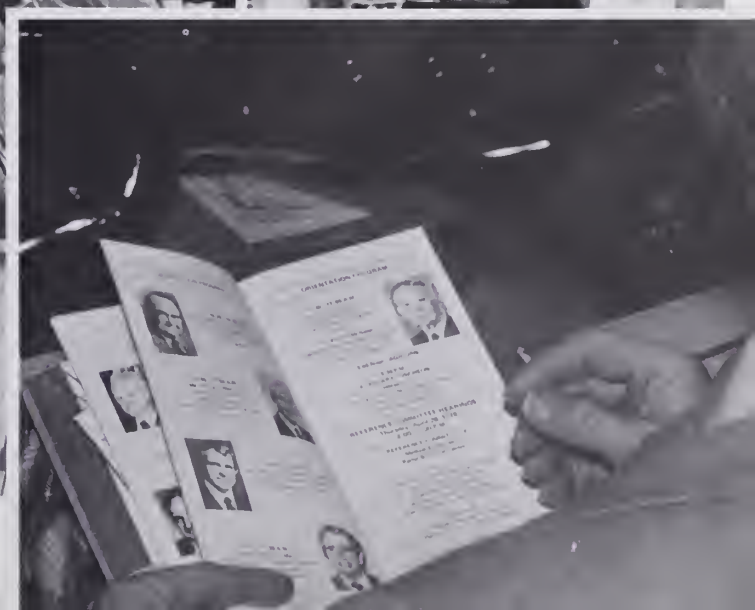

OPERATION OUTREA
WHAT
1. DONATE
2. OBTAIN
3 LEAVE
4 ASK HERE

Orientation, Registration, Exhibits . . .

The purpose of the orientation program for new members is to introduce them to organized medicine. This year the full range of that was represented–from AMA President John H. Budd, M.D., down to the county society level. Approximately 300 physicians attended the program. Registration in Huntsville may have been one of the highest ever–1,002, including more than 600 physicians. One of the highlights of every annual session is the exhibit area. This year there were 52 exhibits.











Reference Committee C in Huntsville had before it the two thorniest issues of the day—a reconsideration of national health insurance, and the Summary Report of the AMA-appointed National Commission on the Cost of Medical Care, called the most important single report since the Flexner Report of 1910. A larger crowd than this was expected, hence the assignment of the Ballet Room in the Von Braun Civic Center. Dewey White, M.D., standing, presided, guiding the Committee through a report that (1) reaffirmed MASA's 1976 position that national health insurance in any form is undesirable but that, of all proposals so far known, one sponsored by AMA is least objectionable; and (2) authorized the Association's AMA delegation to use its discretion on each of the Cost Commission's 48 specific recommendations as presented individually in St. Louis. Left: Committee member Everett C. Mosley, M.D., Huntsville, makes a point as Chairman Dewey White, M.D., Birmingham, ponders. Right: Richard F. Bliss, M.D., who heads Alabama Medical Review, the state's PSRO, warning Alabama physicians if they fail to take effective action to contain costs, federal intervention is inevitable.

REFERENCE COMMITTEE HEARINGS





ALAPAC WINE TASTING RECEPTION

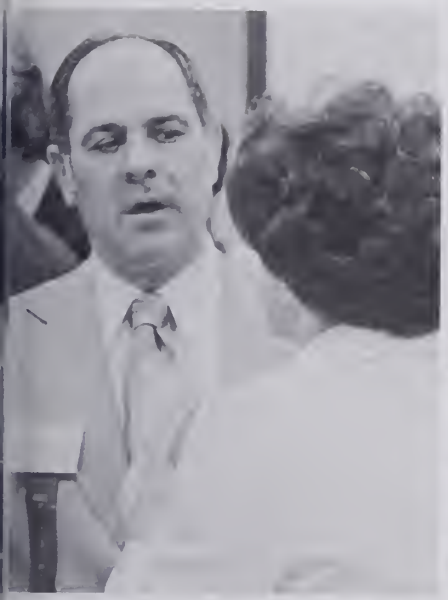


Those who know Leon C. Hamrick, M.D. will recognize a characteristic gesture in these two photos—1) Listening attentatively to the attractive lady; 2) He expresses appreciation, surprise, wonder, amazement . . . 3) Drs. Winston A. Edwards and William L. Smith are much more interested in their own conversation than in the political candidates who were present. 4) William T. Wright, M.D., 1976-77 MASA President, tells it like it is. 5) Incoming President, Hiliary H. Henderson, M.D., enjoys a good story. 6) Lt. Governor and Mrs. Jere Beasley with Dr. and Mrs. Orizaba Emfinger, left and center, and Dr. E. Vernon Stabler, right. 7) Last night as President—John B. M. Rice, Jr., M.D. 8) Paul D. Everest, M.D. and his wife, Peggy, greet an old friend. Related photos, page 18.



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ALAPAC WINE TASTING RECEPTION . . .





J. D. Bush, M.D., with an empty glass, in the last hours of his long service on the Board of Censors. 2) Kenneth C. Yohn, M.D., member of the State Board of Censors, is a good listener. 3) Among those identifiable are, extreme left, Willis D. Israel, M.D., R. Ross McBryde, M.D., hands in pocket, and, extreme right, Dr. and Mrs. Orizaba Emfinger. 4) Rhonda Montgomery pours for Sharon Whitaker, wife of ALAPAC Director Richard C. Whitaker. 5) Mrs. Aubrey E. Terry, left, chats with MASA General Counsel Jack T. Mooresmith and his wife, Susan. Mrs. Terry is 1978-79 President of the Auxiliary. Dr. Terry, member of the State Board of Censors, is otherwise engaged, center. 6) Charles E. Herlihy, M.D., left, former President of the Jefferson County Medical Society, and Charles M. Tyndall, M.D., the incumbent President.





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AWARDS DINNER

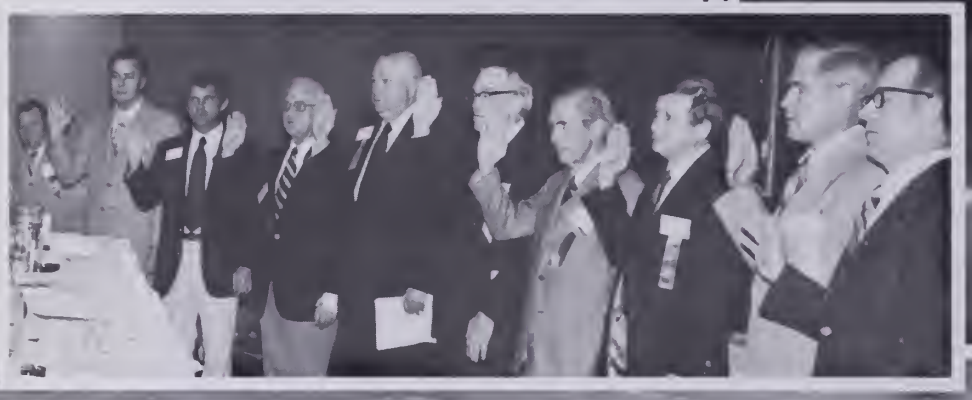
In the 11th hour of his presidency, Dr. John B. M. Rice Jr. holds forth in the spotlight at the Friday night awards dinner. 2) Atty. Gen. Bill Baxley, one of the candidates who attended Alapac's wine tasting party, is greeted by Dr. and Mrs. John Kendall Black Jr., Huntsville. 3) Two of the 50-year doctors honored at the awards dinner recall way back when. Left, Robert Kemp Wilson, M.D., with Frederick Samuel Wolf, M.D. 4) Mr. Clay H. Dean, Montgomery, won the William Henry Sanders Award. 5) The William Crawford Gorgas Award went to Mr. Thomas J. Brazeal, Wedowee. 6) Alan R. Dimick, M.D., Birmingham, was honored with the Samuel Buford Word Award. 7) Ira L. Myers, M.D., State Health Officer, looks puzzled over his surprise present from Mutual Assurance Society. 8) The box contained an umbrella, the gift of Birmingham Trust National Bank. Each physician at the dinner received one.

BUSINESS SESSION

In mock solemnity, President John B. M. Rice Jr., M.D., warns Delegates and Counsellors they would be searched for weapons on returning to the hall after a break to vote on several disputed seats. 2) Newly elected and reelected officers take the traditional oath. 3) The College of Counsellors and House of Delegates in convention assembled. 4) Dr. Rice, right, 1977-78 President, formally passes the symbol of office to his 1978-79 successor, Hiliary H. Henderson, M.D.



[1]



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CLOSE-UP

AMA President John H. Budd, M.D., is being interviewed in Von Braun Civic Center during an orientation program break. His interviewer here, from Huntsville's Channel 19, sweetly exchanged pleasantries and small talk with Dr. Budd during the off-camera warm-up, then pounced on him with such loaded questions as: "Dr. Budd, will the time ever come when I can't afford a doctor?" Dr. Budd, unfazed and seemingly anticipating each sally, answered every question with aplomb and eloquence. He may have benefited, as many physician-leaders have, from AMA's highly regarded Leadership Conference — specifically the course "Mastering Spokesmanship Principles," in which participants are exposed to hostile, argumentative questioners before live camera. They can see how well they did on replay, a valuable experience for physicians unaccustomed to the kind of interrogations politicians and others receive routinely.

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IN JEOPARDY

The American Health Care System

By RON E. HENDERSON, M.D.

The greatest health care delivery system that the world has ever known is in jeopardy.

The free enterprise system, as it now operates in the United States of America, allows the patient the freedom of choice of physician, institution, and other health care providers. It also allows the physician the right to properly refuse treatment to any individual that he does not choose to treat. These basic principles are in jeopardy due to several real problems facing medicine today.

These undebatable problems include the rapidly escalating cost of delivering health care to the citizens of the United States, a maldistribution of physicians (the vast majority of physicians electing to practice in metropolitan areas), and a paucity of family physicians resulting from a time in medical education when most physicians elected to go into specialties, and the majority elected not to do primary care.

Another major problem is the difficulty which a patient has in plugging into the health care delivery system. This is aggravated by the fact that our population is so mobile (40% of the population moves every five years). This difficulty is also due directly to the relative paucity of primary care physicians, a fact dictating very poor practices and schedules.

I would first like to address the problem of health care cost. There are many reasons for health care cost to far outstrip the Consumer Price Index in percentage of increase. Medical technology has literally exploded over the last 20 years, allowing a much more sophisticated level of care. Many diseases that used to be untreatable are now routinely treated but very expensively. An aging population has enlarged the patient base tremendously.

These factors do not even consider the fact that the hospitals have recently been brought under the minimum wage law and the fact that inflationary pressures also affect hospitals, physicians, and other health care providers.

Be this as it may, health care cost containment is a must in the United States in 1978. Government, management, unions, and the general population are rightfully concerned with spiraling health care costs. In my opinion, rather immediate steps must be taken. I feel that these should be voluntarily done, not because of the threat of governmental intervention, but because, simply speaking, it is the right thing to do. Health care must remain affordable to the average citizen if we have a chance of salvaging the free practice of medicine.

The American Medical Association, the American Hospital Association, and the Federation of American Hospitals have organized a national steering committee on voluntary cost containment. It is imperative that organized medicine and individual physicians aggressively and enthusiastically support this effort.

> "Health care must remain affordable to the average citizen if we have a chance of salvaging the free practice of medicine . . ."

This committee has recommended that the chief of staff of each hospital establish a climate of cost awareness. The AMA House of Delegates has endorsed the development of an educational program designed to increase understanding and awareness of medical school faculty, medical students, and house staff of the cost of health and medical care. They also supported options for increasing cost awareness of physicians in practice.

The Medical Association of the State of Alabama should encourage each county medical society to get involved in cost containment. The county Board of Censors should recommend that each hospital form a cost awareness committee, and this probably could be done better under a

county medical society committee, potentially made up of representatives from each hospital in the county. This should be very thought-provoking and eventually effective.

However, my main interest is reaching the individual physician. As a practicing physician, I am personally aware of many ways that health care costs can be decreased without affecting the quality of medical care. Physicians must ask at the time of admission, "Is this hospitalization necessary? Can this patient be comparably evaluated as an outpatient?" He must educate the public to the fact that routine diagnostic studies can and should be done on an outpatient basis.

Many surgical procedures now routinely done in the hospital on in-hospital patients can just as easily be done on an out-patient basis. The fact that a patient has third-party reimbursement, which is only effective while he is in the hospital, should not be a factor in deciding whether or not the patient should be hospitalized. The physician should not acquiesce in patient pressure to be admitted.

Re-Evaluate Routine Orders

Once the patient is in the hospital, the physician should continually ask himself if all the diagnostic and therapeutic measures routinely done are necessary. We must re-evaluate our routine orders to see if they are appropriate in today's climate. You and I both know that many ancillary procedures can be used less frequently without diminishing the quality of care at all. We need also to be continuously aware of how many days the patient is staying in the hospital. At the cost of $100-$200 per day, one day's difference on any length of stay is tremendously significant. The fact that it is not convenient for a patient to be discharged the exact day that he has received optimum length of stay is not reason enough to extend his hospitalization. Physicians should use available hospital personnel to expedite planned discharges. Anticipation and communication with the patient are the key words when considering length of stay.

Physicians are being blamed for 70% of an approximate $162 billion health care bill for our nation. This is a bum rap, but through our approach to the practice of medicine, we can significantly decrease the cost.

Physicians, hospitals, and third-party intermediaries, including insurance companies and the government, must share the blame for getting us into the predicament in which we find ourselves today concerning health care costs. However, the physician is no longer in a position to be the major determining factor for the following reasons. The appetite for health care among the citizens of the United States in this century is insatiable. Bringing more physicians into the system will only increase costs by making the supply greater. The checks and balances that normally control prices according to the laws of supply and demand simply do not work in the medical market place, as many economists have pointed out. Because of the absence of any effective competition for goods and services, the classic laws are inverted. An increase in the labor supply relative to demand should, according to the book, bring prices down. The reverse holds true in the medical market place: as the number of providers increases, the demand increases also and so does the cost of services. This has been demonstrated without a doubt in such places as New York City and Miami, Florida, cities that have among the highest physician/population ratios.

> "Physicians, hospitals and third-party intermediaries, including insurance companies and the government, must share the blame . . ."

In 1977 the total health care cost in this country was $162 Billion. The only part of this that did not inflate at a more rapid rate than the Consumer Price Index was the cost of drugs. In my opinion, the reason for this was that only approximately 12% of the drugs purchased in the United States are paid for by third-party intermediaries. When a physician recommends surgery, it is rare for the patient to discuss the cost of the surgery, because he knows that he has total coverage for what is usual and customary.

There is no incentive on the physician's part to keep his fee down, because there is no recognized usual and customary fee for a procedure in a given geographical area. We operate under the profile system which allows fees to vary as much as 100%. A recent case in point is that in a particular part of Alabama the fee for a cholecystectomy with common duct exploration done by a board certified surgeon varied as much as from $450/case to $940/case. All of the surgeons being reimbursed were board certified surgeons.

The Cost-Plus Factor

Another factor probably responsible for the lack of incentive for cost containment at the hospital level has been the practice of cost-plus reimbursement by major third-party intermediaries and government. This practice actually benefits the least efficient hospitals. Poor management and cost overruns have been beneficial as long as they were among reimbursible expenses. Only recently have hospital administrators been motivated to really trim the fat out of their budgets.

In my opinion, many physicians should hold their fees stable, with the exception of an adjustment for cost-of-living increases; they would suffer few financial consequences. Physicians are, as they should be, among the best-paid professionals in our society. Because of length of study, the tremendous demands on them, long hours and the unique nature of the work they do, they should be appropriately compensated.

However, there are other professionals who are also essential to our society, more so today perhaps than ever before.

It behooves physicians to provide all the assistance they can in this struggle to save a health care system that has benefited more people than any in the history of the medicine. □



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The Carbon Dioxide Laser In Surgery Of The Larynx

James J. Hicks, M.D., Julius N. Hicks, M.D., Boyce J. White, Jr., M.D.
Jeffry B. Schafer, M.D., and Robert Evans, R.N.

Division of Otolaryngology, Department of Surgery
University of Alabama Hospitals and Clinics, Birmingham, Alabama

In 1916, Einstein showed that controlled emission of light energy could be obtained from an atom under certain conditions representing the "aser" principle.[1] MASERs were soon invented and the radio wave became a reality (Microwave Amplification by Stimulated Emissions of Radiation). Lasers (Light Amplification by Stimulated Emissions of Radiation) were first called "optical MASERs."

How Do Lasers Work?

Any time electrons are made to change their speed or direction they radiate electromagnetic energy (light) corresponding to their own unique frequency. The release of this stored energy can be stimulated by subjecting the atom or molecule to a small "shot" of electromagnetic radiation of the same frequency. Radio waves are the result of controlled movement of free electrons outside atoms and molecules. Light is generated by the movement of electrons inside atoms and molecules.

In 1960 the first true laser was invented using a ruby crystal to produce pulses of light (non-continuous). Gas lasers provide the "purest" light of all. To use gas mixtures ingeniously, one uses one gas to energize and another to amplify. Ruby lasers produce flashes of light but gas lasers produce a continuous wave output. Light waves have frequencies millions of times higher than radio waves.

Above the visible band of light waves we find ultraviolet light, x-rays, gamma rays and some cosmic rays. Below the visible band are infrared radiation, microwaves, and radio waves.

The coherence of the laser beam permits it to be concentrated into a tiny area. Whatever total energy is being sent out by the laser can be concentrated to the point where its effective energy is tremendous. The sun emits some 6500 watts per square centimeter. Laser beams have already reached 500,000,000 watts per square centimeter. Our Cavitron Model AO 300 CO^2 Surgical Laser System at full power setting can exceed 1000 watts per square centimeter.

Surgical Advantages of the CO_2 Laser Modality

Since Jako performed careful laser surgery on the larynx of dogs with success in 1971, this surgery has been carefully introduced to humans.[2] In procedures where its use has been clinically demonstrated to be safe and effective, the significant advantages of this modality over older methods of tissue removal (such as scapel, electrocautery, and cryosurgery) are:

(1) The precise control over the exact location of the site, the periphery, and the depth of excision of the removed tissue.

(2) Rapid tissue removal or destruction - compared to that by the scapel, or cryosurgery.

(3) Excellent hemostasis of the proximal areas - due to the exceptional coagulatory ability of the laser beam (only vessels larger than 2 mm. in diameter must be ligated or clamped).

(4) Minimal necrosis of adjacent tissue - and the

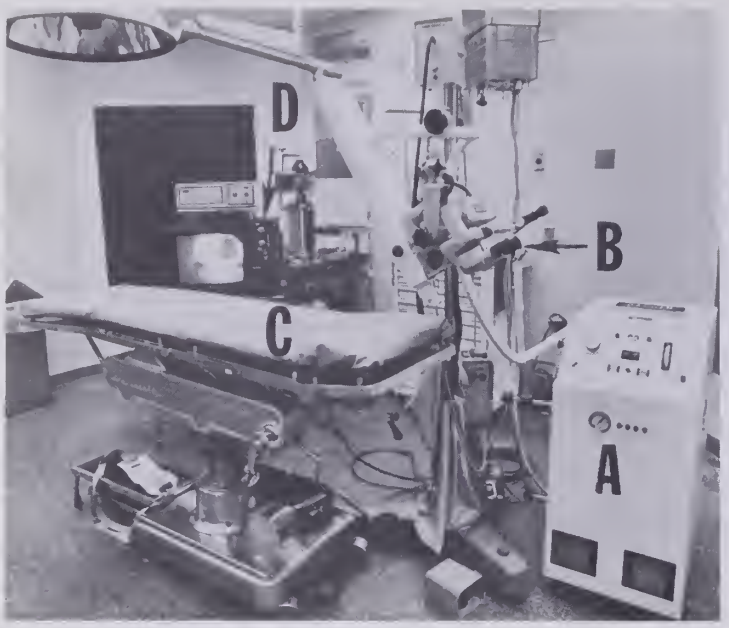
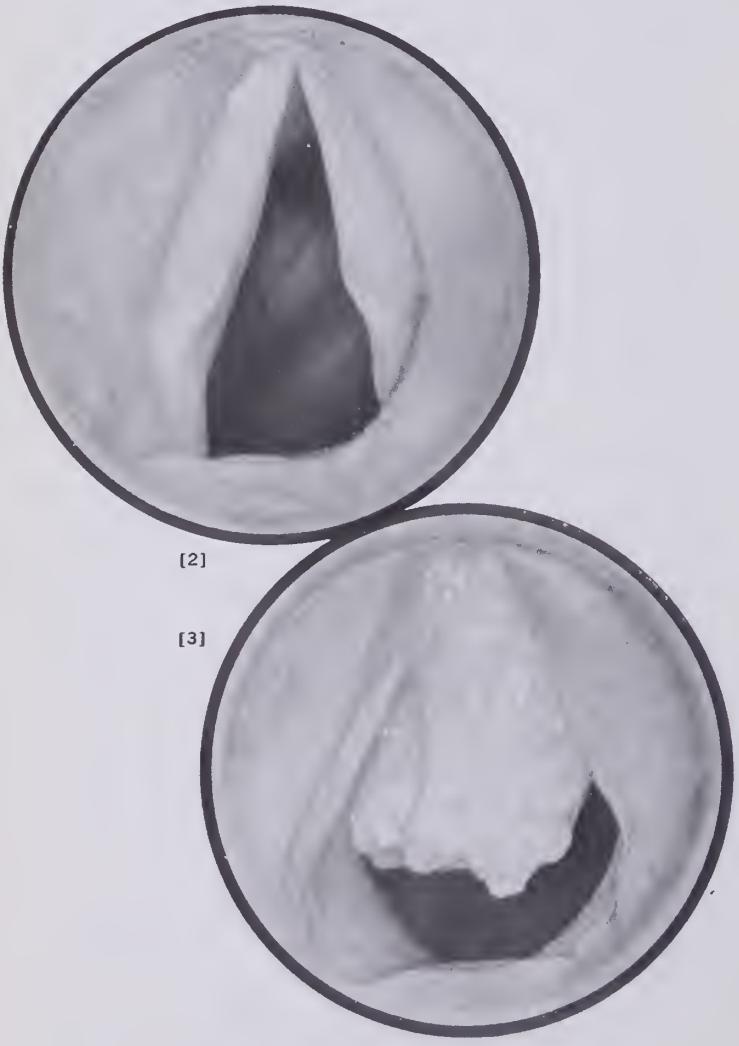


Fig. 1) Laser set-up in operating room, shows laser unit [a] attached to the operating microscope [b]. Beyond the operating table [c] is the videotape camera component and monitor [d]. Fig. 2) Laryngeal aperture of normal vocal cords. Fig. 3) Juvenile papillomata in the larynx.



consequent reduction of post-operative edema, pain, and scarring.

(5) Total sterilization of the work area - because the laser beam destroys both bacteria and viruses.

(6) Minimal risk of setting viable malignant cells adrift to metastasize - since cell destruction is rapid and total in the ablated area.

(7) The ability to remove or destroy tissue in areas which are difficult or dangerous to reach by other techniques (such as the nasopharynx) - because the laser beam can be reflected around corners by polished stainless steel mirrors.

(8) Superior visibility of the surgical site - because the operating microscope gives a magnified stereoscopic, three-dimensional view.

Operating Room Equipment

Our operating room set-up for laser surgery is shown in (Fig. I). The laser (A) is attached to the operating microscope (B). Just beyond the operating room table (C) one can see the videotape monitor (D) for viewing and recording the surgery. In (Fig. 2) one sees a normal laryngeal aperture at the true vocal cords and (Fig. 3) depicts a juvenile papillomatous lesion in the larynx.

Comment

Although laser surgery has been used to remove other lesions of the aerodigestic tract, the anatomic structure which is the most suitable for laser surgery at this time is the larynx. The disease entity for which the laser treatment has been most successful is juvenile papillomata in children. The particular advantages of laser surgery noted in the treatment of juvenile papillomata are the ease of removal because there is almost no bleeding, the accuracy of removal effected by one-tenth to one-half millimeter areas of tissue hydrolysis, and the amazing lack of post-operative edema noted after laser surgery.

Summary

We have lased over 48 cases of juvenile papillomata at The University of Alabama Hospital in Birmingham. We feel this system of treatment demonstrates many advantages, but its use warrants an in-depth knowledge of laser energy's advantages and dangers. □

Bibliography

1. Hellman H: Lasers. U.S. Atomic Energy Commission, Division of Technical Information, Oak Ridge, TN, Jan. 1968.
2. Jako GJ: Laser Surgery of the Vocal Cords. Laryngoscope 82:2204-2216,1972.

Actinomyces Infection Associated With Intra-Uterine Device

Maria da Conceicao R. Santa, M.D.
Bruce O. Buschmann, A.N., CT(ASCP), CMIAC
Sara Jo Daniel, M.D., FACP

Infection of the female genital tract caused by Actinomyces is being found more often affecting the wearers of a variety of intrauterine devices (IUD). Published data is reviewed and the case of a 54 year old black female having worn an IUD for 12 consecutive years is summarized. She presented with symptomatic bleeding and pain. After removal of the IUD, endometrial biopsies were done. The pathologic diagnosis was chronic endometritis and granulation tissue containing organisms morphologically compatible with Actinomyces.

Actinomyces is a normal inhabitant of the mouth and gastrointestinal tract of healthy people, but not of the genital tract.[1] Numerous cases of Actinomyces genital infection have been reported since 1926. An association with the intrauterine device, metallic or polyethylene, has become evident after several severe complications in patients using this contraceptive method.[2]

Actinomyces are anaerobic, gram-positive organisms that are incapable of complete metabolism. They are classified as a phylum of bacteria which has developed independent'y but along parallel lines to the fungi. Their tiny, highly branched mycelia may fragment into bacillary and coccoid forms resembling true bacteria.[2,3]

In human Actinomyces israelii is the most common cause of infection. Cytopathologists recently have become aware of the occurrence of Actinomyces in the Papanicolaou smears of asymptomatic and symptomatic wearers of IUDs.[4] The incidence in these patients in our institution is 9%, and with practice in morphologic identification of the organism, it is being recognized more frequently.

Actinomyces in cytologic preparations are characterized by formation of sulfur granules. Under low power the organisms are seen as irregular islands of amorphous material with the Papanicolaou stain. The granules are thick and have a central core from which the basophilic filaments of the micro-organism seem to radiate. Anaerobic bacteria are invariably associated with it.[3] At higher magnification the individual filaments appear dark blue with the Papanicolaou stain. A parallel arrangement of the filaments is more usual at the periphery.

The filaments are delicate, slender and sometimes beaded. Branching at acute angles is characteristically seen. Pleomorphism is common. A few granules may be composed of thick filaments while others have an amorphous appearance resembling coccobacillary forms. The morphology is more easily demonstrated after specific bacterial staining.[5]

The cultures of this organism in an anerobic medium are positive in only 4% of the cases.

The route of entry, in addition to direct spread from the bowel, may be direct extention across the anal area and perineum upward through the vagina, endometrial cavity to the fallopian tubes and ovaries. The vaginal string of the IUD is thought to break the protective barrier of the cervical mucus, allowing transit of organisms from the vagina into the uterus and from there to the tubo-ovarian complexes.[6] Another route of infection which has to be considered is vascular spread.[7]

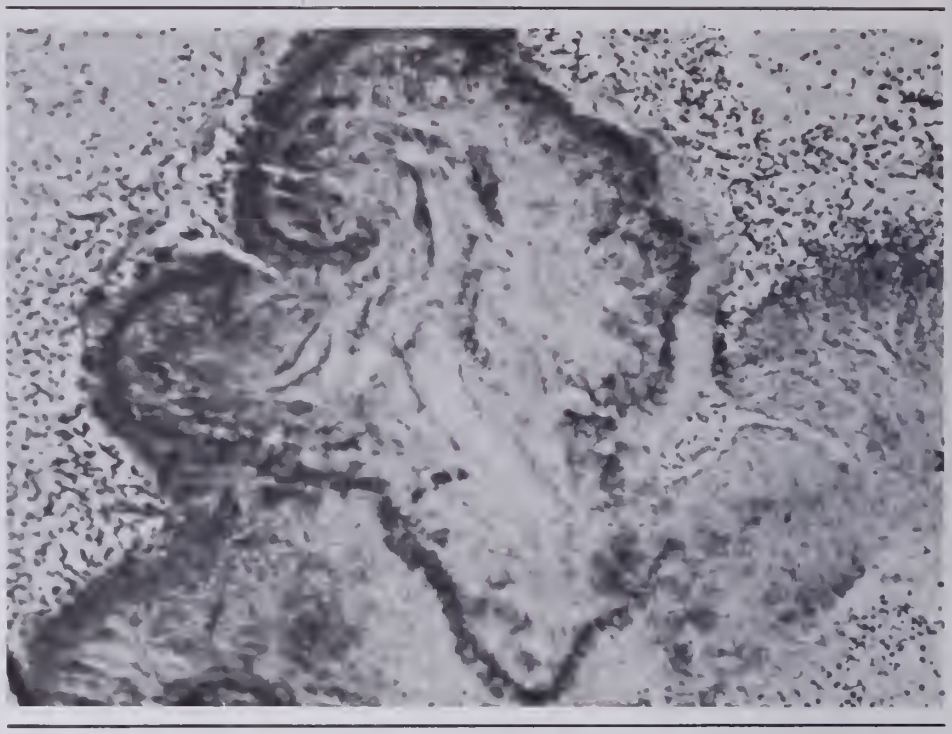
The uterine cavity in these patients becomes a good culture medium for these organisms. Numerous cases of endometritis, salpingitis and tubo-ovarian abscess have been reported; one of which resulted in thoracic dissemination.[7,8,11]

In patients wearing IUDs for one year, 13% presented with chronic endometritis and 65% showed recognizable endometrial change, manifested by diffuse or focal round-cell infiltration.[9]

The symptoms most frequently manifested by wearers of the IUD who presented with infection by Actinomyces were lower abdominal pain, heavy yellow discharge, fever and weight loss.[2]

A new cytologic approach of preparing smears from freshly removed Lippes loops from symptomatic patients, has been reported. The resulting samples have numerous macrophages and fibroblasts. This could be a good method for identifying

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[1]

Actinomyces Infection

Figure 1) Biopsy of endometrium. Presence of "Sulfur Granules" in the inflammatory exudate. H&E Stain. H.P. Figure 2) Areas of condensation in ring form, radiating numerous filaments. Methenamine-silver stain. H.P. Figure 3) Oil immersion for better visualization of the filaments of Actinomyces. Methenamine-silver stain.

Actinomyces in the patients harboring this organism.[1 0]

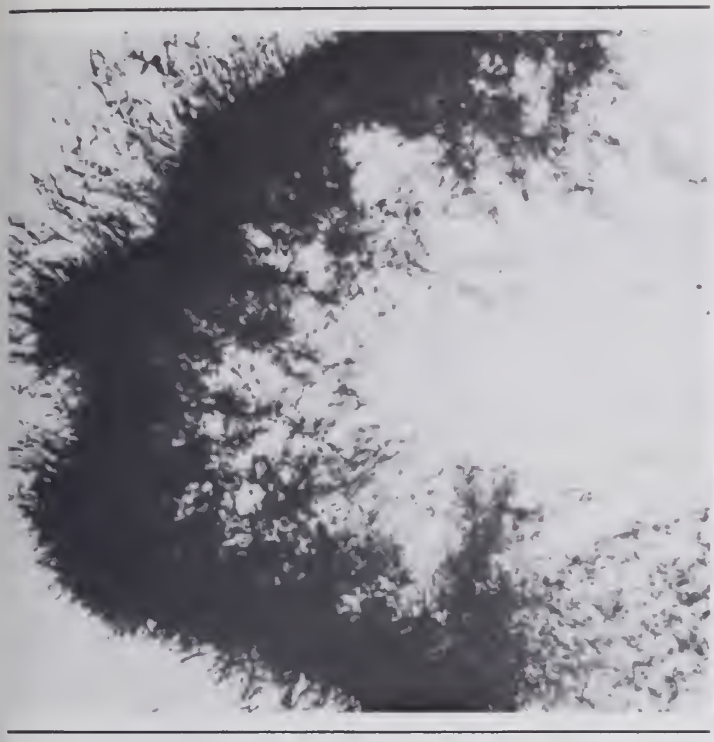
Case Report

J.T., a 54 year old, obese black female, gravida 13, para 12, abortus 1, two years post menopausal, was first seen in the emergency room for vaginal bleeding and lower abdominal pain. The patient had been wearing an IUD for 12 consecutive years. The device was removed and on examination the patient had a purulent discharge coming from the endocervical canal and pain on palpation of the uterus. An endometrial biopsy was performed and the diagnosis was chronic endometritis.

Tetracycline was prescribed but the patient didn't take the medication and returned with fever and persistence of the previous symptoms. Another biopsy was done and the paraffin sections showed sulfur granules of Actinomyces. Gram and Gomori's Methenamine Silver stains were done for better demonstration of the organism. The diagnosis was granulation tissue with presence of organisms morphologically consistent with Actinomyces. (Fig. 1)

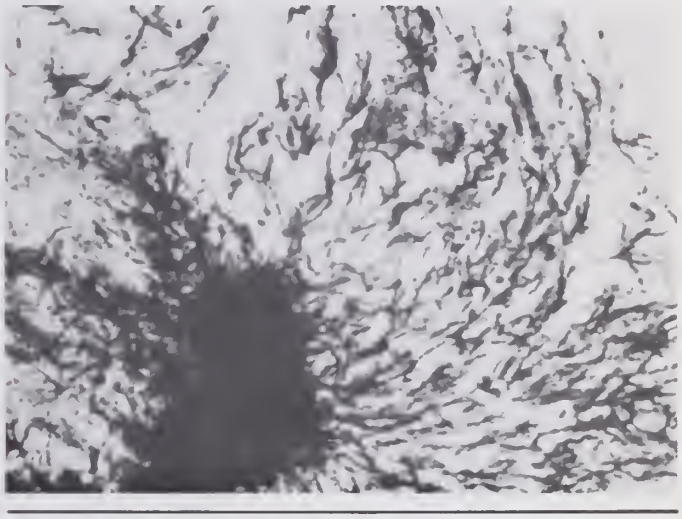
After antiseptic preparation of the vagina and endocervix to avoid contamination, a culture for anaerobic bacteria was taken from suctioned endometrial material. Blood agar and thioglycollate media were used but failed to grow Actinomyces.

In an endometrial biopsy, Actinomyces was present as sulfur granules. Basophilic granules,



[2]

[3]



having areas of condensation in ring form from which numerous filaments radiated, were found. The silver stain provided good visualization of the filaments and morphologic identification was easier. (Fig. 2, 3)

This patient had had several cervico-vaginal smears through the years and retrospective examination of these smears revealed the presence of an amorphous material. Under high power examination this material had filaments and other characteristics of Actinomyces.

Before inserting IUDs, it is important to determine the presence of or history of pelvic inflammatory disease, because actinomycosis is more prone to develop in association with a pre-existent pelvic or intrauterine infection.[6] In this case the symptoms of infection were uterine bleeding, malodorous discharge, low abdominal pain and fever.

Actinomyces and the accompanying bacteria are sensitive to penicillin and tetracycline. However, the avascular nature of the actinomycotic lesion prevents bactericidal concentrations from reaching the organism. Currently, optimal therapy recommended includes wide excision of necrotic tissue and intensive antibiotic therapy which must be continued for at least two months after cessation of symptoms.[3]

Early recognition and aggressive medical and surgical management may prevent the serious sequelae encountered in some reported cases.[6,7]

Actinomyces in the cervico-vaginal smear of patients wearing an IUD does not necessarily mean the patient has actinomycosis but that the organism is present as an opportunist. In any unexplained infection this possibility must be considered. Cytotechnologists and cytopathologists should keep in mind the possibility of finding and consequently reporting this organism in their Papanicolaou preparations. □

References

1. Brenner, R. W., Gehring II, S.W.: Pelvic actinomycosis in the presence of an endocervical contraceptive device. Obstetrics and Gynecology 29: 71-73, 1967.
2. Henderson, S.R.: Pelvic actinomycosis associated with an intrauterine device.: Obstetrics and Gynecology 41: 726-732, 1973.
3. Lomax, C. W., Harbert, G. M., Thorton Jr., W.N.: Actinomycosis of the female genital tract. Obstetrics and Gynecology 43: 341-346, 1976.
4. Buckley, J.W., Tolnai, G.: An alert to genital actinomycosis. CMA Journal 115: 1193, 1976.
5. Gupta, P. K., Hollander, D.H., Frost, J. K.: Actinomycosis in cervicovaginal smears: An association with usage. Acta Cytologica 20: 295-297, 1976.
6. Schiffer, M.A., Elguezabal, A., Sultana, M., Allen, A.C.: Actinomycosis infection associated with intrauterine contraceptive devices. Obstetrics and Gynecology 45: 67-72, 1975.
7. Dische, F.E., Burt, J.M., Davidson, N.J.H., Puntambekar, S.: Tuboovarian Actinomyces associated with intrauterine contraceptive devices. The Journal of Obstetrics and Gynecology of the British Commonwealth 81: 724-729, 1974.
8. Witwer, M.W., Farmer, M.F., Wand, J. S., Solomon, L.S.: Extensive actinomycosis associated with an intrauterine contraceptive device. Am. J. Obstetrics and Gynecology 128: 913-914, 1977.
9. Israel, R., David, H. J.: Effect of intrauterine contraceptive devices on the endometrium. JAMA 195: 764-768, 1966.
10. Sagiroglu, N., Sagiroglu, E.: The cytology of intrauterine contraceptive devices. Acta Cytologica 14: 58-64, 1970.
11. McCormick, J.F., Scorgie, R.D.F.: Unilateral tubo-ovarian actinomycosis in the presence of an intrauterine device. Am. J.Clin. Path. 68: 622-626, 1977.



[1]

A Case Report:

Stones In A Meckel's Diverticulum

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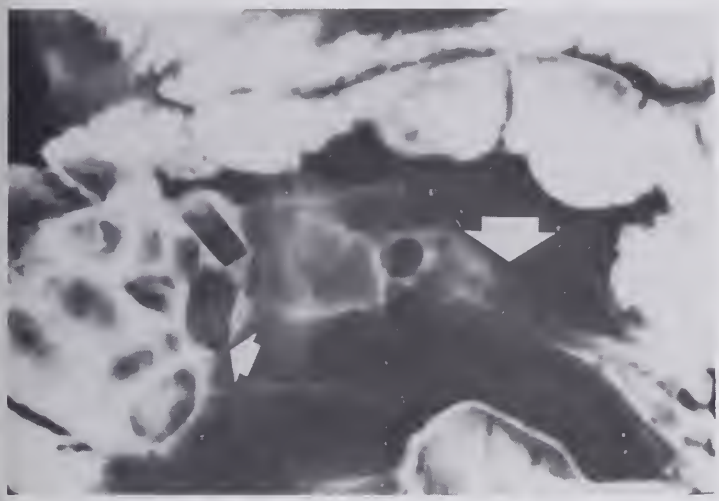
In April 1976, the fourth case of Meckel's diverticulum with stones diagnosed pre-operatively was reported.[1] The fifth case is herein reported.

A 41-year-old white male presented to his family physician with vague peri-umbilical pain of three months duration. Routine physical examination was normal. A scout film of the abdomen demonstrated multiple calcifications in the pelvis. (Fig. 1) He was referred for urological consultation because it was felt that the stones were in the genito-urinary system. On review of the survey films by radiology, the probability that the calculi lay in a Meckel's diverticulum was recognized. An intravenous pyelogram was normal. A barium enema with reflux into the ileum demonstrated multiple faceted stones layered in a Meckel's diverticulum. (Fig. 2)

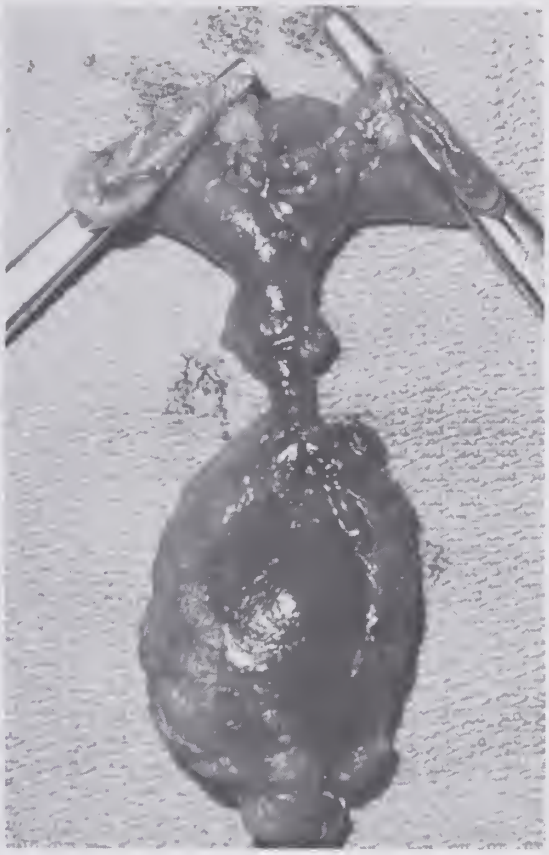
At surgery a 6 x 4 centimeter diverticulum 50 centimeters from the ileo-cecal valve was found. A long, narrow neck (3 centimeters long and 0.3 centimeters wide) connected the diverticulum to the antimesenteric border of the ileum. (Fig. 3) Fifteen greenish-black stones, some as large as 1 x 2 centimeters, were present in the sac. (Fig 4) The patient had an uneventful recovery after resection.

*Surgeons; ‡Radiologist, Lee County Hospital; ‡Urologist, Auburn-Opelika, Alabama.

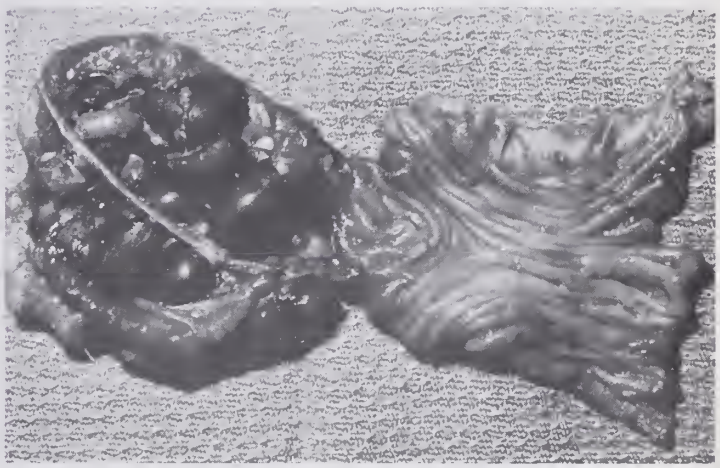
[2]



[3]



[4]



[1] Scout film demonstrating pelvic calcifications. [2] Barium enema with small bowel reflux demonstrating a Meckel's diverticulum with a long neck (large arrow) and multiple stones layered in the diverticulum (small arrow). [3] Surgical specimen with ileum resected showing long, narrow neck of diverticulum. [4] Diverticulum opened showing stones.

Discussion

Meckel's diverticulum occurs in about 2% of the population.[2] Complications are well known and will not be discussed in detail. Most patients present with lower gastrointestinal bleeding in the group under two years of age, while adults present most commonly with intestinal obstruction.[3] Stones in a Meckel's diverticulum are extremely rare with 28 cases being reported in the literature to date.[1] Gershater reported an interesting case of gastrointestinal bleeding due to a solitary stone in a Meckel's diverticulum. No gastric mucosa was present in the sac.[4]

The etiology of the stones is probably related to stasis. Most diverticula have wide mouths and communicate easily with the ileum. Diverticula with stones have longer and narrower necks and do not empty well. Our findings substantiate this pathology. The calculi are usually composed of calcium oxylate and phosphates.[1] □

References

1. Hirschy, James C., Thorpe, John J., Cortese, Armand F.: Meckel's Stones. Radiology 120: 327-28, 1976.
2. Herbert, P. A.: Pathology. Philadelphia, Lea and Febiger, 2d Ed. 1959, pp 695-696.
3. Rutherford, R. B., Akers, D. R.: Meckel's Diverticulum: a review of 148 pediatric patients, with special reference to the pattern of bleeding and to mesodiverticular vascular bands. Surgery 59: 618-626, Apr. 1966.
4. Gershater, Raziel: Enterolith causing bleeding in a patient with Meckel's diverticulum. Radiology 120: 327-28, 1976.

Pasteurella Multocida As A Cause Of Vomiting And Diarrhea In A 4-Year-Old Boy

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Alexander City, Alabama

Pasteurella multocida has been reported as causing a number of types of infection in man. Among these are septicemia,[1] meningitis,[2] respiratory tract infections,[3] sinus infections[4] and as a result of infected animal bites. This is a case of vomiting and diarrhea with dehydration in a four year old who had almost pure culture of *Pasteurella multocida* in his stool.

Case Report

This four year old black male from a rural community in Central Alabama was admitted to the hospital in Alexander City, Alabama, with vomiting, diarrhea, fever and dehydration. He responded to IV fluids and had no difficulty at the time of discharge. He did well for approximately two to three weeks. In the interval, his mother reported that he had been found playing with a dead rat. He was seen in office with loose green watery bowel movements. He did not respond to anti-spasmodics and a restricted diet. He developed 6% dehydration and weight loss. His physical examination on admission showed a well developed black male with marked weight loss. He was febrile and had dry mucus membranes, markedly increased bowel sounds, distended abdomen and decreased skin turgor.

His laboratory showed a hemoglobin of 10.9 hematocrit 32, 16,800 WBC's with 64 segs, 8 stabs, 24 lymphocytes, 4 monos, his sodium was 145, potassium 4.9, chloride 106, Ph 7.467 with a pCO_2 32, urine specific gravity 1.026, 1 plus protein, 1 plus acetone. Stool culture grew almost a pure culture Pasteurella multocida on a SS plate. This was subsequently found on other plates. This organism was found to be resistent to cephalosporians and penicillin by the Krlby-Bauer Disc-Agar Diffusion Method. Subsequent cultures of his blood and his nasopharynx revealed no identical organisms. His treatment in the hospital consisted of being hydrated with D5 in .45 saline at 2,000-ml per meter^2. He was started on clear liquid diet and the marked abdominal destention reoccurred. He continued to spike temperature and became progressively worse. On the third hospital day, prior to the onset to receipt of the cultures, he was started on Chloramphenicol 200-mg, IV, every six hours. He continued to have fever and on the fourth hospital day, aqueus penicillin was administered intravenously. His temperature spikes became lower and on the seventh hospital day, since he continued to spike fever, he was changed to 1 gram of ampicillin IV every six hours. He began to improve dramatically. He was discharged on oral ampicillin, his repeat cultures grew no growth. He was well within normal limits at a follow-up office visit after his discharge from the hospital.

Clinical Comments

Search of pediatric literature revealed that infections with *Pasteurella multocida* are infrequent although the infection had been identified as early as 1886.

It has been noted to be present in wound infections and to cause septicemia. The bacterium has been identified as being present in a number of wild animals including dog[5], cat, deer, rat[6], lions[7] and cattle. It has been known to cause hemorragic septisemia in cattle. It has also been reported as being highly sensitive to penicillin.

This organism was resistent to penicillin and cephalpsporin and did not respond to chloramphenicol alone but required ampicillin clear.

Summary

Gastroenteritis is a common childhood complaint. Most of it being caused by viral agents. Occasionally a child is infected with salmonella, shigella or other bacteria. This child was infected with *Pasteurella multocidia* and responded to antibiotics and IV fluids. □

References

1. Bearn, A.G., K. Jacobs, and M. McCarty: Pasteurella Multocida Septicemia in Man, Am J. Med. 10: 167, 1955.
2. Swartz, M.N. and L. J. Kunz: Pasteurella Multocida Infections in Man: Report of Two Cases—Meningitis and infected Cat Bite, New England J. Med. 261: 888-893, 1959.
3. Olsen, A. M., and G. M. Medham: Pasteurella Multocida in Sypurative Disease of the Respiratory Tract., Am. J. Med. Sc: 224-77-81, 1952.
4. Bartley, E. O., Pasteurella Septicemia in Chronic Sinusitis, Lancet, 2: 581, 1960.
5. Williams E., Septicemia Caused by an Organism Resembling Pasteurella Septics After a Dog Bite, Brit. Med. J., Z: 1926, 191960.
6. Schipper, G. J., Unusual Pathogenicity of Pasteurella Multocida Isolated from the Throat of Wild Rats, Bull. Heplins Hosp. 81: 333, 1947.
7. McGeachie J., Isolation of Pasteurella Septica from a Lion Bite Wound and a Lions Mouth, J. Path. Bact., 75: 467, 1958.



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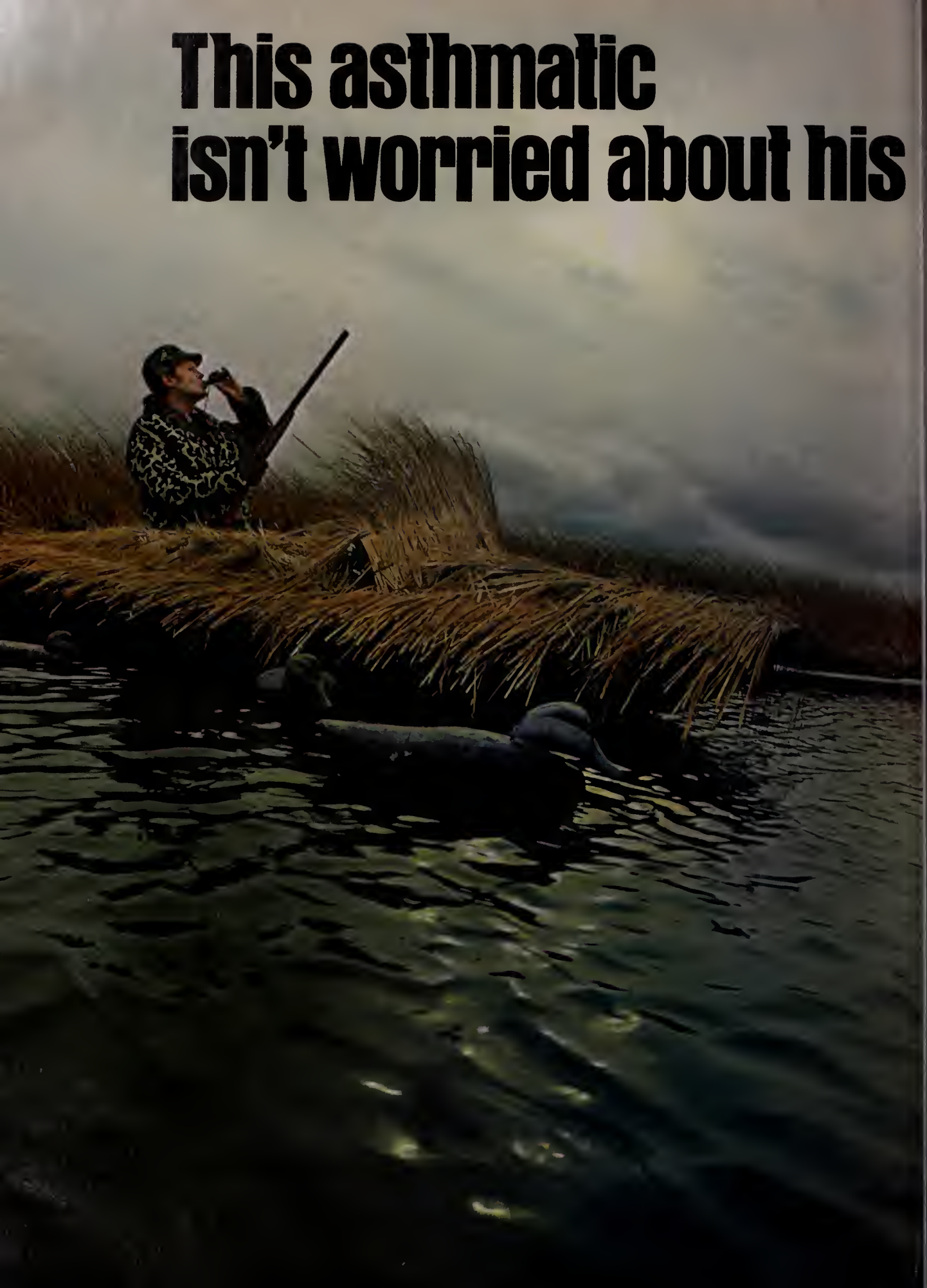
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Reference 1. Data on file. Mead Johnson Pharmaceutical Division.

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Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 μg/ml.
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Mechanics Of Parental Involvement In Psychosocial Problems Of Children

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R. Michael Rutledge

The Institute For Personal Change, P.A.

It is at times difficult to understand how "good" parents produce children with psychological problems. This is reflected in the oft-heard words of doctors who refer children to a child psychiatrist. The usual statement is, "The parents are conscientious, hard-working people and this kid is running them crazy," or some equivalent summary.

It is the purpose of this paper to explain something about the mechanism by which these "conscientious, hard-working" parents produce children with problems which can range from schizophrenia to hysterical disorders, but which is especially likely to produce children with sociopathic disorders. It is important that the professional understand the interaction between the child's problems and the parent-child relationship.

The usual approach to child-rearing is the injunction method. Don't do this, that, etc. The dont's are usually such that if the child were to avoid the actions enjoined, he would avoid most troubles. One must consider, however, the multiple levels of human communication. The injunction itself suggests the behavior enjoined. One may learn from a child that he never thought of an action until his parent suggested it.

Other levels than the verbal can come into play. These levels include voice tone, facial expression, bodily attitude, etc., as the injunction is delivered. A parent can say with a smile, "Don't_____."

Other levels, more abstract, are to be considered. The mother on tranquilizers is hardly in a position to forbid her child to use marijuana. Attitudes held by parents, and manifest in remote areas of living, quite familiar to the child, are always part of the injunction. Examples are:

A lawyer who champions law and order, but dwells admiringly on the devious ways of clients in dinner table conversations; or a physician who dresses immaculately for his professional duties and insists on good dress for his children, but changes to worn jeans as soon as he comes home.

The nonverbal or implied message is a comment on the explicit message, and tells the receiver how to react to the latter. Humor, as when an insult is delivered with a smile, is a case in which the sender, by his nonverbal message, tells the receiver how to react.

The 'Double Bind'

From these considerations, and from knowledge of theory of logical types, Gregory Bateson, et al,[1] formulated the concept of the "Double Bind" as an etiology for schrizophrenia. This concept is that a person's ability to determine accurately the meaning of messages is injured when conflicting messages are given at any two levels of communication and when the receiver of the message is unable to demand clarifications or ignore the message. Sluzki and Veron[2] have written a paper explaining how neurotic behavior can also arise from this situation.

The same considerations were used to define the concept of "Superego Lacunae" by Johnson and Szurek.[3] They proposed that though consciously the parent may desire that his child conform to society's rules and communicate this desire to the child, unconsciously he may want his child to disobey those rules, and that this unconscious desire is communicated at a level different from the injunction to obey, and more strongly.

They propose that the parents unresolved conflicts might select the area of acting out of the child. For instance, the parent with unresolved sexual conflicts might produce a promiscious

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daughter, or one with unresolved aggressive desires might produce an assaultive child. In this regard, one sometimes sees a child with conflicts at school whose parents are over complaint, but bitter at teachers and other authoritive figures.

I have observed the mechanism of conflicting messages at different levels of communication at work in relationship to hyperactive children. A tense, watchful, but controlled mother can produce an over-active child. She does this by communicating nonverbally and often unconsciously, to the child, that danger is present, while verbally the message is "Be still, all is safe."

It seems that the more commanding messages are those of the nonverbal and more organic nature, so that the child in the example above responds to the nonverbal message of danger by over-alert, exploring behavior. In family therapy, the mother can often be helped to explore her fears openly. When this happens, the "hyperactive" child frequently becomes relaxed and peaceful.

Conflicting Message

In the transactional analysis conceptual system, a child may receive an explicit injunction message from the parent's "Parent ego state," but a conflicting message from the parent's "Child ego state."

In terms of learning theory, the parent may inadvertently reinforce (reward) the undesirable behavior. An example is: the parent who buys his child a candy bar in a supermarket when the child threatens, implicitly, to perform a temper tantrum.

A clinical example can be found in the case of a 17-year old boy admitted to the hospital in a panic state following the smoking of "trip-weed." The patient is the older son of a socially conscious mother and a professional father, both from aristocratic southern families. They boy has long hair, plays in a hard-rock band, and rejects all the values of his parents. He calls the parents "plastic," and can find little about them worthwhile.

The hard-working father and devoted mother can find no explanation for their son's behavior. On the ward, the father cornered staff and visitors alike to denounce the "evil companions" who had led his son into his "evil ways." In a note on his son's birthday, he prayed that his son be delivered from evil people and evil ways.

It was learned that the family lived in an apartment, though their income would have allowed them to live in any residential area in the city. The father, though "believing in the system," did not want to risk buying a house. Though believing in the "American Way," he was resentful of paying his medical bills, and openly envious of "those bums" on welfare who can get the best doctors free of charge. These sentiments, voiced in a discharge conference, border on paranoia.

The mother could not understand why her child had not responded to her love. She had, of course, devoted her life to her child. It turns out, however, that she was actively involved in a wide range of social organizations doing "good works." She had never heard her child, an accomplished professional musician, in a concert, and "could not stand" his music.

It is clear that both parents were giving conflicting messages at different levels. The child is responding primarily to the unconscious messages sent by, but denied by, the parents. At times he had made attempts to point out discrepancies and had been labeled disrespectful and insubordinate.

Double Messages Difficult

Double messages are difficult to work with in any context, but in the family they are devastating, especially to a child, who is helpless in the face of the powerful parents, and who is so malleable at the early ages. Siding with the parent's view of themselves as innocent victims also contributes to firm organization of the system around the child as a problem.

It is important that all of us in the helping professions be aware of those mechanisms of family interaction. We need to be aware of the ways in which the parents are contributing to and supporting the child's "problem" behavior. We must also avoid too much sympathy with the parents since the parents tend to give greater force to those who vindicate them and aid them in their defensive maneuvers.

For example, if the family physician has also been mystified by the child's behavior and has suggested a "biochemical" abnormality as a possible cause, then dealing with the family's communication patterns and problems or the unconscious conflicts of the parents, etc., becomes more difficult.

The considerations raised in this discussion also account for some of the failures in various treatment schemes. If the parents, in the course of counseling or a class on child management, change their behavior or intensify their efforts, the behavior of the child may also change and the problem behavior disappear. If the parent then relaxes and returns to previous patterns of interaction, this may serve as a signal to the child to resume his old patterns of behavior and the

improvement will have been temporary and the treatment a failure.

It is necessary that therapy be structured to involve the parents and to help them to become aware of the interaction patterns in the family. The parents must become aware of the content of their messages on all levels so that they can give corrective messages which are consistent on all levels.

They must also become aware of their own problems and conflicts which contribute to their difficulties with their children. □

References

1. Bateson, G., Jackson, D.D., Haley J, and Weakland, J. H. Toward a theory of schizophrenia. Behavioral Science, I: 251-264.
2. Sluzki, Carlos E. and Veron, Eliseo. The double bind as a universal pathogenic situation. Family Process 10: 397-410, 1971.
3. Johnson, Adelaide, M., and Szurek, S.A. The genesis of antisocial acting out in children and adults. Psychonal. Quart. 21: 323-343, 1952.

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COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting of April 19, 1978:

- Was advised that three physicians cited for delinquent certificates of death had completed all outstanding certificates.
- Was advised of progress in collecting delinquent birth certificates still outstanding from Huntsville Hospital.
- Confirmed 18 Deputy Registrars of Vital Statistics for Mobile County.
- Confirmed the appointment of James L. Holston, Jr., Dr. Ph., Director of Clinical Laboratory Administration, effective April 1, 1978, replacing Thomas S. Hosty, Ph.D., retired.
- Approved for transmittal the State Health Planning and Development, Application, P.L. 93-641, for the administrative program for a third year of conditional designation.
- Received information regarding problems arising from the premature reviews by HSAs in the Section 1122 Program.
- Approved the initial issuance of Assurance of Need for 17 projects.
- Approved recommendations from the State Emergency Medical Services Advisory Board endorsing applications for IV Fluids and Drug Supplies for 15 ambulance services.
- Approved a review cycle schedule for proposed revision of EMS Rules, Regulations and Standards with public notice beginning April 26, 1978, and the final date for receipt of written public comments on June 2, 1978. The public hearing on this subject will be June 14, 1978, coincident with the State Committee of Public Health meeting.
- Received a memo dealing with National Guidelines for Health Planning which is also being shared with the Statewide Health Coordinating Council.
- Received a report on radioactive monitoring resulting from the Chinese Atomic Tests of March 14, 1978, and the increased radioactive levels noted between March 21 and March 24, 1978; levels were detectable but did not require action.
- Was advised that two patients have been identified with defects under the neonatal hypothyroid screening program. This finding is running approximately twice the level expected to date.
- Was given an immunization update report including the emphasis being placed on the administration of mumps vaccine and intensive efforts to immunize as many children as possible during the remainder of the current school year.
- Was advised of Regional Office provisions by the Department of Health, Education and Welfare for health services delivery by the addition of a Primary Care Section dealing with health initiatives and special service need areas.
- Referred to the Council on Prevention of Disease and Medical Care a request to study the feasibility of screening for alpha fetoprotein during the first trimester of pregnancy for the prevention of neurological defects in children.
- Elected Dr. Ira L. Myers as State Health Officer for a term of five years.
- Received a report of Alabama's Vital Events for 1976 and encouraged its use by health planning agencies. □

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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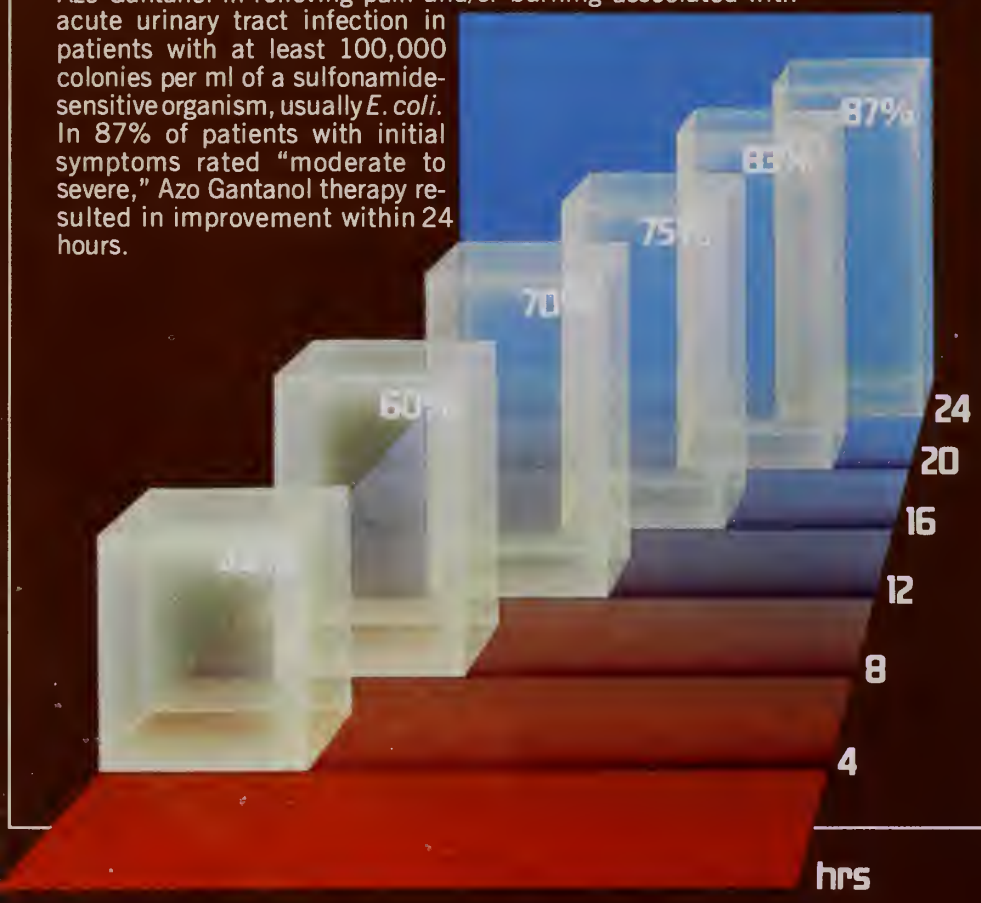
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Important data on the pain of acute cystitis:

In 87% of patients studied [303 of 349], Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

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TECHNIQUES IN PRACTICE MANAGEMENT

By Lynn M. Olson
Assistant Program Director
Department of Practice Management
Division of Medical Practice
American Medical Association

INSURING HONESTY IN YOUR PRACTICE

"My medical assistant had worked with me for five years before I found out she'd been taking cash from the practice. She was a good, efficient worker and, I thought, a loyal employee. How could she do this to me?"

Have you heard one of your colleagues make a similar lament lately? Most doctors never doubt the trustworthiness of their medical assistants and for good reason. Their employees are honest. But, when physicians discover they are victims of embezzlement, their first reaction is one of disbelief. The facts are, many doctors are easy targets—an embezzler's delight. Surveys done by professional consultants show that money will be embezzled from one out of every five physicians during their practice career.

Why are physicians such easy prey for pilfering employees? A primary reason is indifference to the daily business operation of the practice. Physicians who never bother to run periodic checks on the finances of their practices are all too vulnerable to dishonest employees. Considering the amount of cash that flows through a typical practice each year, it is easy to see how even the most honest employee may be tempted to dip into the till, or how resentment may build in the employee who isn't promoted to a higher salary range. "And besides," thinks the employee, "doctors are so wealthy, they won't miss $20 here or there." In most cases of embezzlement, the employee's crime can go undetected for years while losses can grow to staggering figures.

Unfortunately, even the most careful physician cannot devise a fail-safe system which can totally eliminate embezzlement. For this reason, it is important for you to safeguard your practice assets with "honesty insurance" or what is known as a fidelity bond. This type of insurance is relatively inexpensive and can reimburse you for losses due to fraud or dishonesty. Fidelity bond insurance, of course, will not reimburse you for losses due to "honest" errors arising from negligence or incompetence.

The most common fidelity bond insurance covers your entire staff and is known as a "blanket bond." It will cover *all* employees in your office, regardless of the job they perform. Other bonds are available to cover specific *individuals by name* or a *specific position* in your office. In the latter case, any person who fills that job function in your office is covered.

Although most insurance companies offer fidelity bonds, some individual agents may not be very familiar with various offerings. We would suggest that you check with your attorney, accountant, or consultant before you buy.

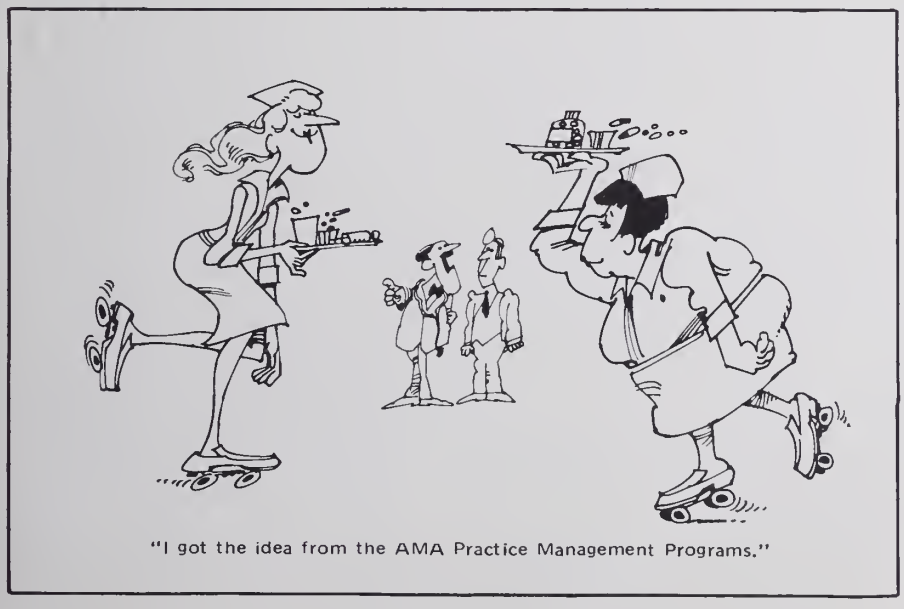
How much protection should you buy? That depends on your philosophy. Some physicians bond for only $2,000 or $3,000 as a deterrent value. But, to realistically protect against actual losses, you should purchase a minimum of $20,000 worth of coverage. A large group practice or corporation would probably want to ensure for an even greater amount.

What does a bond cost? Again, rates may vary. Usually a bond is relatively inexpensive to add to your total insurance package. The cost can begin as low as $50 a year for a one-employee practice. Costs would increase by $10 per year for each additional employee.

Some physicians are reluctant to bond their employees, particularly those with many years of service. You can alleviate employee objections, simply by pointing out that bonding is good business practice. An honest assistant should not mind. The assistant who objects loudly and refuses to be bonded, however, may be telling you something.

Remember, the ultimate responsibility of safeguarding the practice rests with you. Check references from all past employers when hiring a new aide. And beware of the loyal assistant who works late hours, takes work home and never goes on vacation. Divide responsibilities among your assistants so that no one employee has total responsibility for financial transactions. And above all, run periodic checks and audits yourself.

After all, you have nothing to lose, except your honest earnings. □



"I got the idea from the AMA Practice Management Programs."

PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

EMERGENCY MEDICINE: Age 30; Alabama 1974; National Board Certified; seeking practice in emergency room, single specialty group, institutionally based or partnership. Available July 1978. LW-11620.

FAMILY PRACTICE: Age 52; St. Louis University, 1961; National Board Certified; seeking practice in multi-specialty group, single specialty group or industrial. Available October 1978. LW-11662.

GENERAL PRACTICE/FAMILY PRACTICE: Age 57; University of Kansas, 1950; Will be American Board Eligible in 1978 in Family Practice; seeking practice in administrative, institutionally based or public health. Available September 1978. LW-10786.

GENERAL PRACTICE/GENERAL SURGEON: Age 57; Marquette University, 1951; seeking practice in solo, partnership or emergency room. Available July 1978. LW-11524.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03

INTERNAL MEDICINE: Age 32; Tulane, 1971; American Board Certified in 1974 in Internal Medicine; seeking practice in town of 25,000 to 50,000 population. Available at a negotiable time. LW-0500.

INTERNAL MEDICINE/PULMONARY DISEASES: Age 55; Southwestern Medical, 1948; American Board Certified in Internal Medicine; seeking practice in school health, institutionally based, or public health. Available April 1979. LW-11941.

OPHTHALMOLOGY: Age 39; Rush Medical University, 1975; National Board Certified; Will be American Board Eligible in 1978 in Ophthalmology; seeking practice in solo, partnership, or single specialty group. Available July 1978. LW-11980.

OPHTHALMOLOGY: Age 33; University of Alabama, 1971; American Board Certified; seeking private, partnership or group, industrial or institutional preferably in the Mobile area with a population of 25,000 or more. Available July 1978. LW-200.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

ORTHOPEDIC SURGEON: Age 45; University of Mississippi 1961; American Board certified; seeking practice in medium or large city. Available July 1978. LW-700

PEDIATRICS: Age 30; Downstate, 1972; American Board Certified in Pediatrics; seeking practice in institutional, public health, school, clinic or emergency room preferably a town near Phenix City. Available July 1978. LW-0501.

ORTHOPEDIC SURGEON: Age 31; Med. College of Georgia 1972; seeking practice in town of 50,000 plus population. Available August 1979. LW-701

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PEDIATRICS: Age 27; University of Texas Southwestern, 1975; National Board Certified; seeking partnership, single specialty group or solo. Available July 1978. LW-10873.

PSYCHIATRY: Age 54; University of Cincinnati, 1951; American Board Eligible in Psychiatry; seeking general, specialty, or assistant or associate practice in town of 100,000 plus population preferably Montgomery. Available this summer. LW-0502.

SURGEON: Age 35; Medical University of South Carolina, 1968; seeking practice in specialty in a town with a population of 50,000 - 200,000. Available in the fall of 1978. LW-0503.

SURGEON, GENERAL/FAMILY PRACTICE: Age 32; Univ. of Mississippi 1973; will be American Board eligible in 1978 in General Surgery; seeking single specialty or multi-specialty group or partnership. Available October 1978. LW-08593

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400

UROLOGY: Age 30; Yale Univ. 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

PHYSICIANS WANTED (Opportunities for Practice)

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and larger cities contains a progressive 74 bed hospital. Ample opporltunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17.

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital provileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PHYSICIAN WANTED to take over busy practice in General Medicine in convenient location of Tuscaloosa. PW-05178

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

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AUXILIARY

CARING AND SHARING
THE SECRETS OF LIVING
BELONG TO CARE, BELONG TO SHARE

Mrs. Aubrey E. Terry
President, A-MASA

During years past our Auxiliary to the Medical Association of the State of Alabama has functioned as a vibrant, active group within our state, and also at the national level. Our fortunes continue as one of our own, Mrs. Ben H. Johnson, Jr., of Bessemer, will be recommended by the National Nominating Committee to become President-Elect of the Auxiliary to the American Medical Association for the year 1978-79. We are very pleased to have Ruth selected for this most distinguished honor and certainly wish her the best in this future endeavor.

As you may or may not know, other states too have been aware of some of our accomplishments and have recognized us by electing three of our members to be President of the National Auxiliary to the American Medical Association. Mrs. Seale Harris represented us first in 1925-26, while at the same time serving as our state leader from 1923-1929. Many years later Mrs. William G. Thuss of Birmingham and Mrs. John M. Chenault of Decatur were each also elected to this very prominent office and have continued to make contributions too numerous to list at both the national, state and county levels.

Within Alabama, our history has been one of steady growth since our inception at Mobile in April of 1923. We came upon the scene with twenty-three physician's wives present and in June of 1977 peaked to 1805 members following a year of concerted membership effort.

During the tenure of our immediate past President, Mrs. John S. Taylor and her Board, we have continued to see some superb planning, development, and implementation in many areas, especially in the fields of health and education. We are appreciative to those who have worked so diligently for Auxiliary and it will be our purpose to try to do no less. However, in this article it will be impossible to enumerate for you all our anticipated activities and projects. But let me assure you that our organizational work will continue to grow and should become more interesting, and even better coordinated since MASA has brought together excellent facilities and an efficient staff at the State Association Office in Montgomery.

Even with all these advantages, in the final analysis much of what we are to be, or hope to become will still lie within our own domain. I hope we remain cognizant of the likehood that an organization can be but little better than the efforts exhibited by individual members within our component country groups. Input is desired from all those involved because it seems to me that never before has there been a greater need for clearer thinking among concerned people; and seemingly never before has the desire to communicate this concern become more apparent. One can easily surmise from more recent written reports that there is a pressing need for the dissemination of knowledge and understanding, and a necessity for patience within ourselves, among our families, and in our own locals.

Keeping the above thoughts in mind, I would like to challenge you this year to make membership a major goal — on the county, state and national level. We all know that numbers are a vital necessity to the life of this organization. The success of our present endeavors, as well as that of future undertakings, can only be assured through dedicated participation. Our First Vice-President, who serves as State Membership Chairman, along with district and county officers, will play their key role, but to do an effective job they must have the support of everyone. Membership campaigns should be planned with attention given to every detail. It is urgent that each person be made aware of their importance and in return feel a personal responsibility for enlisting new members. Many rules can be followed for promoting growth; but very essential, I believe, is the one which allows each individual to feel wanted and needed.

As the year progresses each Auxiliary should establish some goals or incentives, and hopefully will analyze the membership potential of every county, organized and unorganized. We solicit the assistance of local Medical Societies in securing helpful information.

Growing and sharing together is fun, but growing together through service is rewarding, not only for ourselves but to the communities we serve. There is much to be done, and we can be successful only through unity of purpose. As I alluded to you, seeds of greatness have been planted in our past history. Now with enthusiasm, careful planning and dedicated effort we too can have a rich heritage. Certainly "Caring and sharing must be ingredients of the secrets of living— Won't you JOIN US — WE CAN DO MORE TOGETHER."

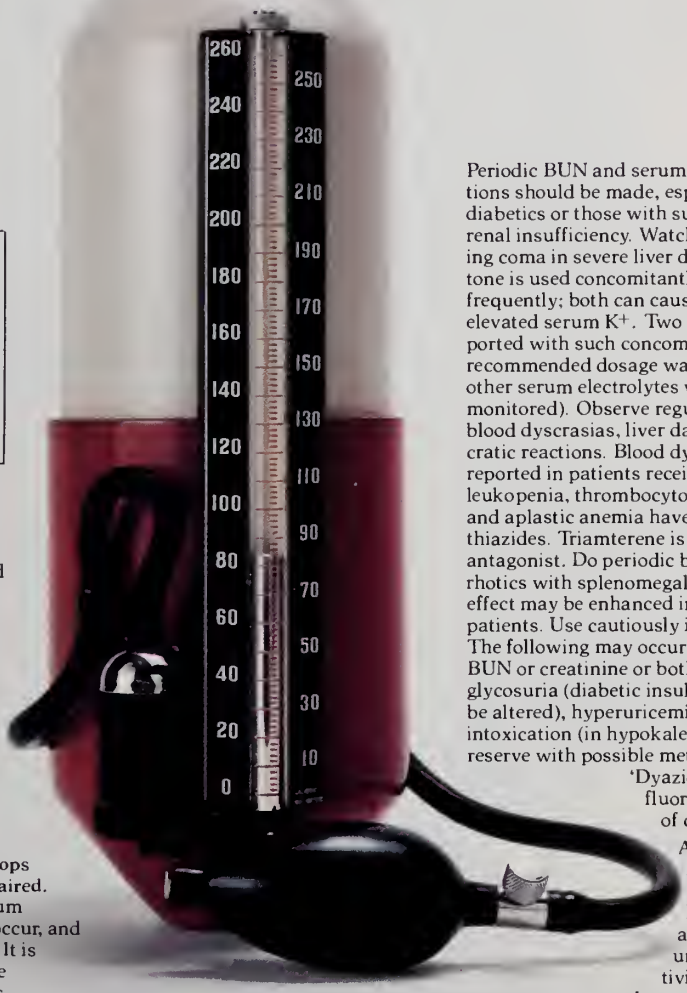


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Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis.

'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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(potassium gluconate)

Kaon® Tabs
(potassium gluconate)

BRIEF SUMMARY
Kaon Tablets/Kaon Elixir

KAON® (potassium gluconate) TABLETS

Description: Each sugar-coated tablet supplies 5 mEq. of elemental potassium (as potassium gluconate 1.17 Gm.). Kaon Tablets are sugar coated, not enteric coated, which favors dissolution in the stomach and absorption before reaching the small intestine where the lesions with enteric potassium chloride have occurred. The sugar coating merely adds to palatability and ease of swallowing, not to delay absorption as does the enteric coating.
Indications: Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. It may be used in the treatment of cardiac arrhythmias due to digitalis intoxication.
Contraindications: Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.
Warning: There have been several reports, published and unpublished, concerning nonspecific small-bowel lesions consisting of stenosis, with or without ulceration, associated with the administration of enteric-coated potassium tablets alone or when they are used with nonenteric-coated thiazides or certain other oral diuretics. These small-bowel lesions have caused obstruction, hemorrhage and perforation. Surgery was frequently required and deaths have occurred. Available information tends to implicate enteric-coated potassium salts, although lesions of this type also occur spontaneously. Therefore, coated potassium-containing formulations should be administered only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Coated potassium tablets should be used only when adequate dietary supplementation is not practical.
Precautions: In response to a rise in the concentration of body potassium, renal excretion of the ion is increased. With normal kidney function, it is difficult, therefore, to produce potassium intoxication by oral administration. However, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentra-

Time is the test of all things

1954
1978



tions of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

In hypokalemic states, especially in patients on a salt-free diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation. In these circumstances, Kaon (potassium gluconate) should be supplemented with chloride. Ammonium chloride is an excellent source of chloride ion (18.7 mEq. per Gram), but it should not be used in patients with hepatic cirrhosis where ammonium salts are contraindicated. Other sources for chloride are sodium chloride and Diluted Hydrochloric Acid, U.S.P.

It should also be kept in mind that ammonium cycle cation exchange resin, sometimes used to treat hyperkalemia, should not be administered to patients with hepatic cirrhosis.

Adverse Reactions: Nausea, vomiting, diarrhea and abdominal discomfort have been reported. The symptoms and signs of potassium intoxication include paresthesias of the extremities, flaccid paralysis, listlessness, mental confusion, weakness and heaviness of the legs, fall in blood pressure, cardiac arrhythmias and heart block. Hyperkalemia may exhibit the following electrocardiographic abnormalities: disappearance of the P wave, widening and slurring of QRS complex, changes of the S-T segment, tall peaked T waves, etc.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications." Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

KAON® (potassium gluconate) ELIXIR

Description: Each 15 ml. (tablespoonful) supplies 20 mEq. of elemental potassium (as potassium gluconate, 4.68 Gm.) with saccharin and aromatics. Alcohol 5%.

Indications: See Kaon Tablets.

Precautions: See Kaon Tablets.

In hypochloremic alkalosis, potassium replacement with potassium chloride (e.g., Kaochlor® 10% Liquid) may be more advantageous than with other potassium salts.

Adverse Reactions: See Kaon Tablets.

Overdosage: See Kaon Tablets.

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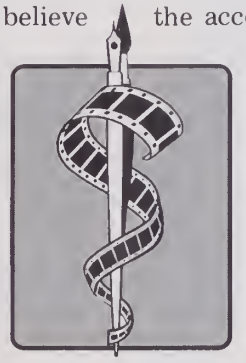
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The CME Earlybirds–A Hearty Species

By George D. Oetting, Ed.D., Director of Education

Listed below are the MASA "CME Earlybirds" – those members who have already met MASA CME membership requirements by being awarded the AMA Physician Recognition Award between July 1, 1976 and May 8 of this year. The total number is 409 – approximately 12% of our membership.

Congratulations are in order, because these individuals have accomplished this personal educational development voluntarily, before the mandatory MASA CME requirement becomes effective July 1, 1979. There are undoubtedly others who have or will meet these requirements through the AMA or equivalent programs such as AAFP. All of these people will be receiving a special MASA Physician's Recognition Award, later on this year.

In personal discussions with many MASA members, I get the feeling that there is still some confusion about requirements, starting dates, etc. Perhaps a few words of explanation will provide clarification:

To get the AMA Physician's Recognition Award (PRA) an M.D. must acquire 150 hours of CME over a three-year period. This does not all have to be 150 hours of live Category 1 programs; many kinds of education experiences are creditable including teaching, writing, professional reading, self assessment exams and patient care conferences.

You can choose when to start the three-year period for the PRA award – you don't have to wait until July '79. Perhaps you have been active in CME this year; if so, you could elect to have your three-year period cover January '78 - January '81. The main thing here is that all MASA members have to start participating, keeping records, etc. by July '79 – but earlier participation is encouraged. The AMA annually sends information and forms to all Alabama physicians who currently do not have the PRA.

Abrams, M. J.; Abu-Libdeh, A. J. H.; Akin, J. M., Jr.; Albright, J. D.; Ambrose, M.C.; Anderson, R. L.; Arias, Manuel; Ashford, R. S.; Askew, W. A.; Avent, C. K.

Bailey, W. C.; Baker, G. L.; Bancroft, J. D.; Barelare, Bruno; Barnes, Z. B., Jr.; Bass, R. W.; Battersby, E. J.; Beck, J. L.; Benkwith, K. B.; Bentley, R. J.; Bernhard, C. B., Jr.; Bernstein, Michael; Berry, R. W.; Blake, T. M.; Blake, W. H., III; Block, W. H.; Bodie, C. W.; Bodie, B. F.; Bolding, O. T.; Bonner, M.S.; Brandes, P. I.; Brannan, J. P., Jr.; Brannon, R. A., Jr., Brantley, J. K., Jr.; Branyon, E. W., Jr.; Bream, P. R.; Bridges, W. R.; Brower, W. J.; Brown, A. M.; Brown, R. E.; Browne, W. C.; Bryant, R. E., Jr.; Buckingham, J. L.; Buerger, C. L., Jr.; Burford, A. M., Jr.; Burson, R. A.

Caffey, R. D.; Calix, A. A., Camp, C. L.; Campbell, E. F.; Campbell, R. E.; Cannon, H. E.; Capel, Wallace; Caplash, V. K.; Carson , A. J.; Carter, R. W.; Casey, A. E.; Cezayirli, Cemil; Chi, P. C.; Childs, H. A., Jr.; Christopher, N. E.; Chunn, V. D., Jr.; Cohn, S. K.; Collier, J. B.; Combs, R. M.; Cook, R. D.; Copeland, A. J., Jr.; Cosby, R. M.; Crabtree, S. F.; Crawford, W. V.; Crook, J. L.; Crow, J. B.; Crum, W. B.; Cumbie, W. G.; Currier, V. M., Jr.; Curtin, R. A.

Dahlene, Oscar, Jr.; Datnow, Boris, Davies, J. S., Davis, D. W., Jr.; Davis, T. D.; Deinlein, D. A.; DeLong, J. F.; Dempsey, B. K.; Dillard, J. D.; Dinerman, W. S.; Ditoro, Peter; Dorrough, B. F.; Douglas, G. C.; Douglas, J. B.; Dubovsky, E. V.; Duggan, M. L.; Duke, W. C.

Eagan, J. T.; Eakes, T. L., Jr.; Edmonds, G. W.; Edmonds, L. C.; Egerman, K. E.; Eich, W. F., III; Eichold, Samuel; Eiland, C. M.; Eisenhardt, O. F.; Elliott, C. B.; Elmore, J. D.; Elsas, F. J.; Elwell, H. B., Jr.; Ennis, J. M.

Fawal, I. A.; Feibelman, N. D., III; Fetterman, L. E.; Finch, R. A.; Fincher, J. A., Jr.; Finchum, R. N.; Finlay, A. G., Jr.; Finley, Sara; Finley, W. H.; Finney, J. O., Jr.; Fisher, C. J.; Fleming, W. C.; Flippen, J. W., III; Ford, R. G.; Fore, D. L.; Fraser, L. K.; Freeman, A. M., Jr.; Freeman, R. M.; Froelich, R. E.; Frommeyer, W. B., Jr.

Galbraith, J. G.; Garrett, W. L., Jr.; Gascoigne, J. T.; Gibson, T. A.; Gillmann, R. W.; Glaser, Wolfram; Glenn, L. E.; Goldblatt, E. L.; Goldstein, H. J.; Gordon, G. R.; Graham, G. S., Jr.; Grant, S. W.; Green, R. C.; Griffin, R. P.; Gutierrez, F. A.

Hagood, J. H., Jr.; Haigler, E. D., Jr.; Hall, G. C., Jr.; Hall, H. J.; Hannon, K. M.; Hansberry, G. W.; Hansford, W. C.; Harris, B. A., Jr.; Harris, E. A.; Hatcher, H. A., Jr.; Haynes, J. E.; Heard, C. C.; Herlihy, C. E.; Hicks, J. N.; Higginbotham, J. M.; Ho, K. J.; Hodges, S. C.; Holifield, R. M.; Hollingsworth, J. H.; Holt, J. H., Jr.; Huber, D. C.; Hughes, A. J.; Humbert, P. V.; Hume, J. F.; Hunt, A. C.; Hutchinson, H. H.

Igou, R. A., Jr.; Iser, Martin

Jander, H. P.; Jenkins, C. W.; Johnson, B. K.; Johnson, D. L.; Johnson, H. C.; Johnson, J. R.; Johnson, Lloyd, Jr.; Johnston, F. C.; Johnston, W. W.; Johnstone, R. E.; Jones, D. H., III; Jones, P. B., Jr.; Jordan, C. D.; Jordan, J. S., Jr.

Kahler, J. G.; Keeling, J. B.; Keith, W. A.; Kelly, J. B.; Kendrick, J. E.; Khalid, L. P. K.; Kile, D. L., Jr.; King, R. T.; Kinzer, G. M.; Kirkland, T. N., Jr.; Klapper, M. S.; Kogutt, M.S.

Lamkin, T. G.; Lamon, E. W.; Landers, B. L., Jr.; Langdon, H. R.; Lary, J. H., Jr.; Lay, J. V. M.; Lee, J. E.; Lee, J. M.; Leigh, M. M.; Leslie, D. P.; Lewis, J. K.; Logue, H. E.; Lokey, R. H.; Lord, J. D., Jr.; Loveman, D. E.; Lowery, J. W.; Luckey, C. F.; Lum, R. K.; Lumpkin, T. R.; Luna, R. F.; Luther, A. L.; Luton, N.S.

Mali, D. J.; Mantle, J. A.; Martin, F. G.; Martin, R. G.; May, S. T., III; Mazyck, E. M.; McCallum, M. H.; McCarley, J. T.; McCoy, W. C.; McCrory, Ellann; McCue, Patrick; McDonald, C. C.; McInnis, C. R., Jr.; McLaughlin, L. D.; McLaughlin, R. J.; McLaughlin, R. P.; McNally, M. R.; McRae, J. D.; Meadows, E. R.; Meiman, G. L.; Meyer, I. S.; Michaelson, Julius; Mihas, A. A.; Miller, D. P.; Miller, N. M.; Minor, W. H., Jr.; Mitchell, Kermit; Monheit, G. D.; Montgomery, J. T.; Monzingo, G. F.; Moore, J. R.; Moore, M. J.; Moorefield, C. W.; Moorman, R. S., Jr.; Morgan, Cecil, Jr.; Morris, J. B.; Morris, S. J. B.; Morrow, J. A.; Mortensen, A. V. N.; Moseley, S. O., Jr.; Moskowitz, M. L.; Mosley, B. R.; Moss, P. B., Jr.; Mracek, J. F.; Mullins, R. B., Jr.

Naftel, R. S.; New, T. G.; Newell, R. B.; Nicholas, F. E.; Nichols, N. C.; Niemann, K. M. W.; Nofzinger, J. D.; Nolen, Thomas M.

Odom, S. A.; Okoye, C. N.; Orso, R. W.; Osband, Richard; Owen, A. P.; Owens, W. F., Jr.; Owings, J. M.; Owings, W. J. B.; Owings, W. O.

Packard, J. M.; Palacios, E. J.; Parks, J. M.; Patton, R. C.; Paulk, C. T.; Payne, T. J., III; Peake, J. D.; Pedersen, A. N.; Perry, S. R.; Petcher, P. W.; Peterson, E. J.; Pfister, R. R.; Phelps, R. C.; Phillips, D. J.; Phillips, H. L.; Pigford, M. L.; Pineda, T. Q.; Plumb, V. J., Jr.; Poole, W. L., Jr.; Porch, E. F.; Praytor, H. B.; Pressgrove, L. W.; Price, H. B.

Ramsey, J. E.; Rao, D. A.; Reddy, M. A.; Reddy, V. D.; Reed, J. F., Jr.; Reinhardt, J. D.; Rencher, J. L.; Reque, P. G.; Rhyne, R. H., Jr.; Ritchey, H. M.; Roberts, S. S., Jr.; Robinson, A. E.; Robinson, P. I.; Roth, R. E.; Rowe, R. A.; Roy, V. C., Jr.; Rudd, G. E.; Rudell, J. H.; Rush, W. D.; Russell, R. B.; Russell, R. O., Jr.; Russell, R. T.; Rutherford, C. L., Jr.

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Thomas, B. F., Jr.; Thompson, I. D.; Thrasher, H. R.; Thuss, W. G., Jr.; Tisdale, W. W., Jr., Tomerlin, C. G.; Toole, A. F., III; Toro-Leyton, C. E.; Treanor, J. J.; Trick, T. L.; Trousdale, P. S.; Tucker, M.S.

Upshaw, M. L. H.

Vaughn, H. M.; Veazey, C. F.; Verma, K. K.

Waddell, C. C.; Waddell, J. R., Jr.; Waldo, F. B.; Walker, J. A.; Walker, J. C., Jr.; Walker, J. H.; Wang, J. F.; Ward, A. A.; Ward, J. K.; Warren, C. M., III; Webb, E. L.; Weinrib, M. M.; Wells, B. B.; Wells, B. E.; Wells, T. W., Jr.; Wetta, W. J.; White, C. A.; Wilcoxson, G. P.; Wilhite, W. C., Jr.; Williams, R. E., III; Wilson, R. K.; Windham, S. W.; Wood, R. V.; Woodruff, C. R., Jr.; Workman, R. B.

Yelton, C. L., Yonfa, Alfonso; Young, L. S.

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- ☐ Ed Laughlin, M.D., "Diagnosis and Treatment of Small Bowel and Colon Treatment"
- ☐ Peter Jander, M.D., "The Use of Arteriography in the Diagnosis and Treatment of Acute GI Bleeding"
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- ☐ Alan R. Dimick, M.D., "Overview of Critical Care in Alabama"
- ☐ Merrill R. Barron, M.D., "Critical Care Issues in a Small Community"
- ☐ Harlan H. Stone, M.D., "Diagnosis and Treatment of Upper GI Bleeding"
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LETTERS

'Disability': Function and Dysfunction

Editor, The Journal:

The two articles on "What is Disability?", by Claude L. Brown, Jr., M.D., and Harry M. Hancock, in the March 1978 issue of the *Journal of the Medical Association of the State of Alabama* are introduced by a very provocative statement and a searching question, "Is there an iatrogenic element in 'Disability'?"

I submit that the answer to the question is "Yes." As so aptly put in the first sentence of the editor's comments, "One of the fondest tenets of a benevolent society, is that the 'disabled' shall be cared for." Yet, society in many areas of our country, including Alabama, places the responsibility for the judgement of disabled or not disabled, on the physician. Subsequently, the interpreter of the public guidelines for disability will modify this judgement "if" the justification for the pronouncement is not consistent with public policy. Lastly, within this triad of physician, society and patient, is the patient, who in the final analysis is the only arbitrator of his or her goals in life with the perception of a role in society.

If society is the benevolent element in the disability triad, and the patient the perpetrator, why is the physician as an individual member of the society included at all? He is included because of his background and training which enables him to measure deviation from normal in terms of dysfunction and to make a standard measurement of this in terms of percentage of deviation. The latter process is the backbone of the practice of medicine, exemplified by the history, confirmed by physical examination and many times supported by laboratory studies. The curriculum of medicine is replete with subjects covering function and dysfunction of the human body. But where are the courses on disability of the human body, except in the area of the ultimate dysfunction known as death?

As Dr. Brown points out, it is easier to see more harm than good in terms of dysfunction in many of the total disability recipients. The iatrogenic element here may be in the part the physician who complies to a request from society that he pass individual judgement on disability, when realistically, the physician has skill in only measuring dysfunction. This iatrogenic element could readily be removed if the physician would stick to what he knows best — measuring dysfunction — and purposely stay out of the social business of passing judgement on the degree of disability.

Lowell E. White, M.D., Professor,
Dept. of Neuroscience, College of Medicine
University of South Alabama

Brief Summary of Prescribing Information
Combined TEGOPEN® (cloxacillin sodium)
Capsules and Oral Solution
For complete information, consult Official Package Circular. (12) TEGOPEN 9/11/75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

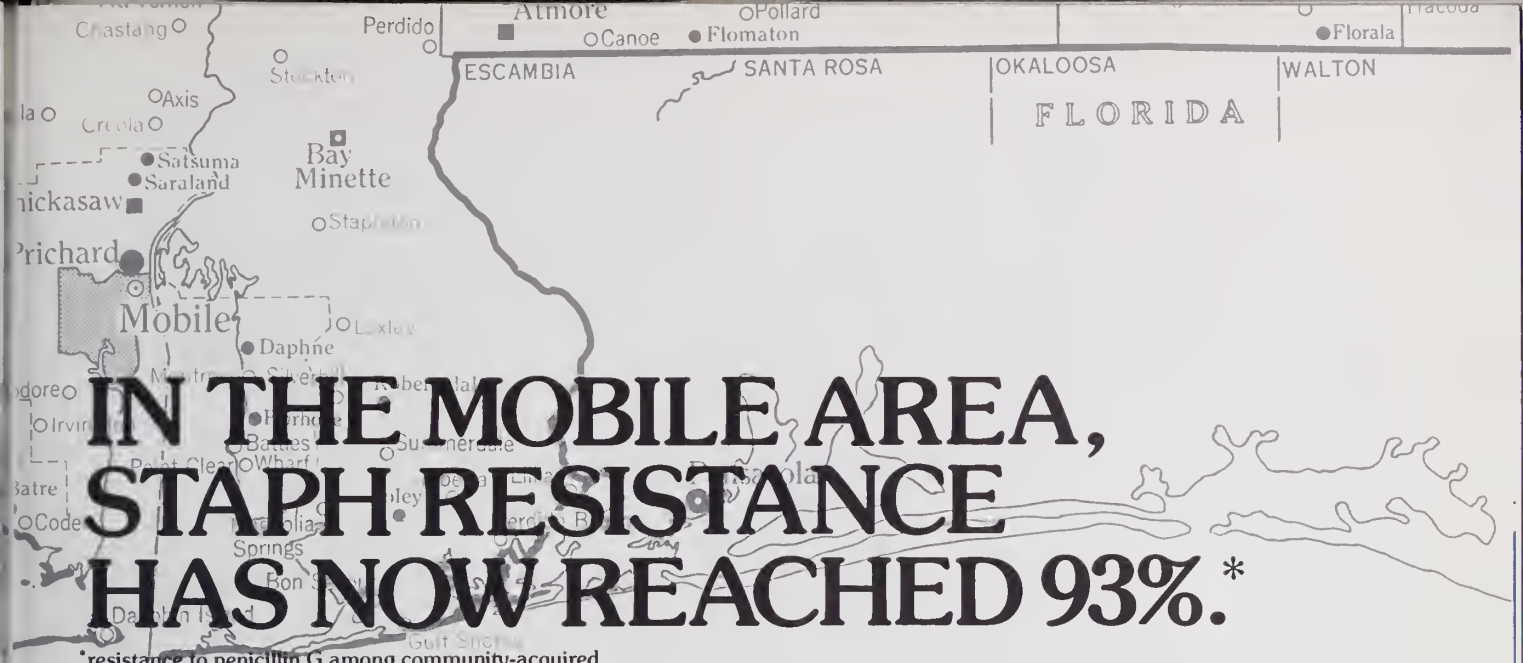
Usual Dosage: Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

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Albertville-Boaz

A Case Study In Attracting Physicians

By William R. Willard, M.D., Dean
College of Community Health Sciences
The University of Alabama

It is a well recognized fact that small towns in rural Alabama need physicians, many of them need physicians desperately. The new Family Practice Programs at Tuscaloosa and Huntsville are now beginning to graduate young physicians prepared to practice. Other programs, such as those at Birmingham, Mobile, Gadsden, Montgomery, and Selma will be turning out family physicians within a few years at most. Can these young physicians be pursuaded to practice in Alabama, especially in the small to medium sized communities where they are needed most?

A January issue of the *Birmingham News* featured a story entitled "A Tale of Three Doctors." This story was about three of the recent graduates of the residency program at the College of Community Health Sciences who decided to practice in the Albertville-Boaz area and establish the Sand Mountain Family Practice Center. Four months after starting the practice, the three young physicians have 4,200 patient records on file and are seeing an average of 100 patients a day. Why did these young physicians select the Albertville-Boaz area?

Election Process

As a case study, several significant points emerge which should be meaningful to other communities and especially to members of the medical profession who are practicing in areas needing more physicians.

These three residents went about the decision-making process of selecting a community for practice in a systematic way. They mailed approximately 70 letters to chambers of commerce in Alabama communities that seemed large enough to support a three man group. About one-half of the 70 chambers of commerce replied. Only two said they did not need a physician.

After reviewing these replies, the residents decided to visit 20 communities. They based their selection of communities to visit on several factors: 1) the availability of good

facilities for medical practice; 2) the size of the referral area; 3) the economic level of the community; and 4) the apparent interest and enthusiasm of the community in attracting them as physicians. This interest was expressed in personal letters from various key people in the community.

In making a final decision, the residents were impressed with the Albertville-Boaz area, in part, because of the effectiveness of the community in presenting its needs for medical services, its economic, educational and social resources, and the opportunity to practice high-quality medicine.

It should be noted that the Albertville-Boaz community had an active physician recruitment committee working for several years. The physician recruitment committee represented the key segments of the business and social life of the community and included, political, business and civic leaders, pharmacy, hospital administration, and other professional groups. And the committee had done its homework thoroughly.

There was some initial "stumbling" but the committee members soon realized that potential family physicians would become available shortly from the Tuscaloosa and Huntsville programs. The committee secured a consultation visit from The University of Alabama. It also prepared a semi-professional slide/tape presentation that dealt with the issues in which the residents were really interested, not the issues in which the committee members originally thought would concern the residents. The presentation did not try to over-sell the community with propoaganda, but included relevant hard facts. It should be of no surprise, but apparently it is, that few communities know how to sell themselves well to prospective young physicians.

A major point made by the residents was the attitude of local physicians.

Three physicians in the Albertville-Boaz community were serving or had served on the physician recruitment committee. All three were enthusiastic in encouraging the three residents to practice in their community and in showing the residents what the community had to offer the young physicians, including the hospital and other medical facilities. One took a half day from his practice for this purpose. One physician's wife invited a large number of the leading families to a social gathering to meet the prospective physicians.

The Albertville-Boaz community did not try to buy the residents with guaranteed salaries; instead, the community offered to help the residents through long term, low interest loans and in other ways to acquire the facilities they needed for modern medical practice.

It should not be overlooked that Albertville and Boaz are two separately incorporated communities. They were able to submerge any rivalries which existed and work cooperatively to accomplish a common purpose.

Rude Physicians

What about the communities the residents did not choose? The major problem was the local physicians who apparently did not want any competition. In one community, the local physicians were described as "absolutely rude." In several situations the chamber of commerce or physician recruitment committees had done a good job, but their work was undermined by local physicians.

These communities can say: "Like Pogo, we have met the enemy and he is us."

One of the Albertville physicians who helped to attract the three young residents made the point that the new physicians had not reduced his practice significantly; he was still busier than he cared to be. He appreciated being able to share night and weekend coverage with them. Interestingly enough, the community, with the support of the local physicians, is now trying to attract additional physicians, primarily specialists, to complement the services of the family physicians.

Conclusions

Several conclusions seem apparent from this case history:

- The local physicians must supply leadership or at least enthusiastically support the community effort to attract new physicians. They must work effectively with the local chamber of commerce, political leaders, and others in an effort to attract new physicians.
- The community should organize a physician recruitment committee and this committee must do its homework thoroughly. It must obtain from appropriate sources hard data about economic, educational, cultural and other resources it has to offer. These should be packaged in a semi-professional way for effective presentation. The committee should not attempt to oversell the community, but should deal realistically with the questions of interest to the prospective physicians.
- Rarely will a single young physician enter practice alone. He will want one or more colleagues with whom he can work comfortably.
- There must be a genuine enthusiasm and much personal attention paid to the prospective physicians from all segments of the community.
- The community must be willing to make an investment in providing or helping to finance the facilities required for modern medicine practice. A community can rarely "buy" a young physician, but it can help immeasurably in making it easy for him to initiate his practice.
- The recruitment committee must be prepared to work for several years if necessary. Instant success can not be expected. The Albertville-Boaz committee worked for more than three years.

There is a post script which should be added to this article: Because of the community support and enthusiasm in Alberville-Boaz, the three-man Sand Mountain group decided to add a fourth physician. It makes me a little sad but, as a representative of the University dedicated to serve the state, I can not begrudge the fact that the fourth man is a valued member of our own full-time faculty. □

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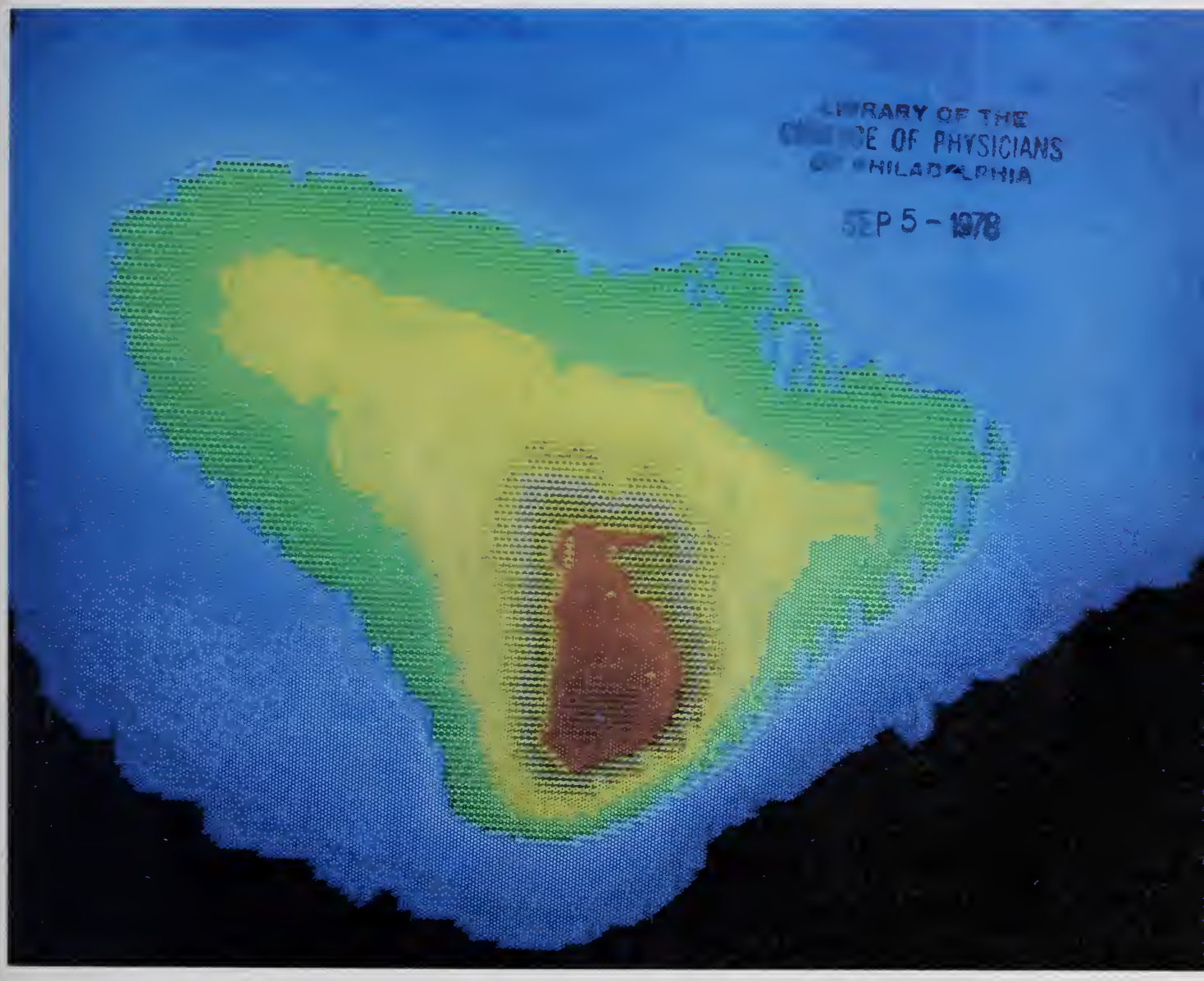
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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

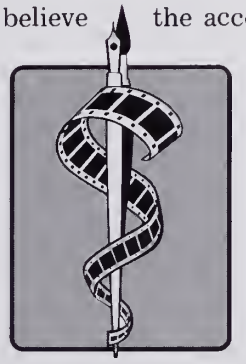
***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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ABOUT THE COVER

The Society of Nuclear Medicine is celebrating its 25th anniversary year. The cover photograph illustrates one aspect — cardiology — of the present marvels of nuclear medicine. An article on the subject is planned for the July issue — where nuclear medicine is in the country and in Alabama, which now boasts 135 members in a specialty organization recently granted representation on MASA's Interspecialty Council. The colors in the heart image represent various levels of activity. Photo by Wm. H. McDonald, from the Department of Nuclear Medicine, Lloyd Noland Hospital, Fairfield, James F. DeLong, M.D., department director.

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FROM THE EXECUTIVE DIRECTOR

The Object Of Envy

Nothing succeeds like success, and nothing is envied more than success.

This is the story of the Alabama State Board of Health, designated by the state Legislature in 1875 to be the Medical Association of the State of Alabama.

Since the 19th Century, the Alabama system of public health management has been regarded nationally and internationally as an almost perfect model, in both conception and performance. Functioning through the monthly public meetings of the State Committee of Public Health, the Association's medical stewardship has pioneered in many areas of public health and given the people of this state superior leadership.

No one, to our knowledge, really challenges that success story. When they speak of "breaking up" the State Board of Health, and the Committee, they don't dare contend that the performance of you, the physicians of Alabama, has been anything but unexcelled.

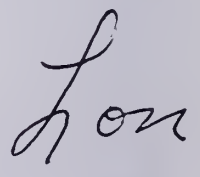
In proposing to politicize Alabama public health, what they are really saying is that the 100-year record has been so unblemished it's downright irritating.

So they want to Balkanize it, break it up into warring units, to make it more exciting. They may call it "democratizing" public health, but what they really want to do is to toss it into the political cockpit.

The modern trend in government is in the opposite direction — toward insulating sensitive agencies from the daily push and shove of partisan politics. In Alabama, non-political organization of public health was far ahead of its time. Naturally there are people who resent that — and who are jealous of the resounding success story.

Once again, there are plans afoot to end all this, to take public health away from physician control: ruin for ruin's sake. The Governor's Reorganization Bill of 1977 could have done this, but was rebuffed. Paraprofessionals covet seats on the Committee, for all kinds of reasons. HSAs, for their own reasons, want to smash it, and crowd-pleasing newspapers resort to downright demagoguery in their shrill campaigns against what they view as too much aristocratic rule by Alabama physicians.

We need your help in resisting these attempts to throw Alabama public health back into the uncertain turmoil of the political arena.



S. Lon Conner



Cost Containment

Hiliary H. Henderson, Jr., M.D.
President

Concern over costs in medical care is certainly nothing new. Some of the complaints about how much it costs to get sick go back to Biblical times.

Between 1965 and 1975, expenditures for health skyrocketed 300%, and they are still rising sharply, as you know.

Now, everyone is concerned: patients, state and federal governments who foot some of the bills, other third-party payers, hospitals and physicians. And it is the physician who, some say, is the real villain because he makes the critical choices in using the increasingly expensive resources of the health care system.

A year ago, HEW Secretary Joseph Califano told the AMA in San Francisco that American doctors have been strong on quality care but weak on cost control.

If he is correct, as the National Commission on the Cost of Medical Care seems to have concluded a few months ago, what are physicians doing about it?

Of course, we have already begun. In 1975 MASA established the state's PSRO, Alabama Medical Review, which, as you know, has concerned itself with quality control in Medicare and Medicaid.

Also, earlier this year, MASA joined with state hospitals in Alabama's Voluntary Effort, which was the AMA's state-by-state response to a congressional challenge that health providers check spiraling medical costs or fail at the price of restrictive legislation.

This is the year when the Carter Administration has promised its whole health program — or package, or plan, as they sometimes call a raft of bills. One of these bills, which may be in draft form by the end of summer, is national health insurance, but only one of them.

Thus 1978 may be the last chance doctors have to resist federal encroachments that could ultimately lead to total federal control of medicine.

Some may think that's inevitable anyway, so why worry about it? I believe we still have a chance to prevent Washington from throwing the baby out with the bath. I believe American medicine can be saved for future generations, but I don't believe it can if we don't try.

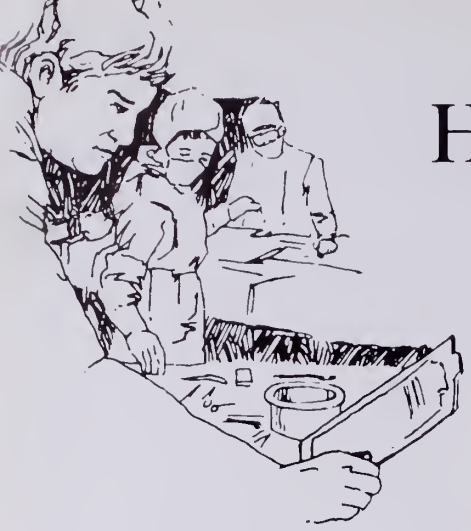
In May, the Board of Censors established a special physician committee on cost containment, so urgent did the Board consider the challenge. That Committee, headed by Dr. Ronald E. Henderson, has already begun meeting. But it was immediately decided that it would have to be enlarged, to broaden the base, not only geographically but by specialties.

More Alabama physicians will be called on to serve in an investigation of Alabama health costs by Alabama physicians. This may be the last chance to have to handle this our way, which is always to place quality first.

Just as all physicians in the country must work together on this, and all state associations, so must state associations turn to county societies for their ideas and assistance.

I don't think I'm overstating the case when I say the hour is late — very late. After so many years of talking about it, the threat of national health insurance is here, along with other intrusions that will change forever American medicine if we choose to do nothing.

Hiliary H. Henderson Jr.



Health, Wealth And Culture

By SILAS W. GRANT, B.A., M.D.
Acting Dean, The University of Alabama In Huntsville
School of Primary Medical Care

The relationship of poverty and wealth to culture and the effect of these variables on the art of medicine at any given period are problems that raise more questions than answers. How do changes in the economic and artistic status of a society affect the role of the healer? Do periods of outstanding achievement in medicine parallel times of greatness in a culture as a whole? While a thorough consideration of these issues is beyond the scope of this article, the interplay of affluence and cultural achievement with the art of medicine influences how to teach and practice it.

It is easy to cite instances of what appear to be direct relationships between high points in medicine and peaks of achievement in other arts. Certainly Imhotep of Egypt with his first public clinics and hospitals equalled the achievements we can see in the Old Kingdom tomb structures and statues left in the arid Nile Valley. The Hippocratic School was contemporary with the Golden Age of Greek Culture. Galen enjoyed the wonders of the Rome of the Emperor Marcus Aurelius, whose physician he was. The achievements of Avicenna and the Arab physicians paralleled the rise of Islam.

In Renaissance Europe we note the teaching of the art of medicine at Salerno, then at Padua, and then the great Vesalius, contemporary of Leonardo and Copernicus; the physician Pare and Paracelsus were also making their contributions in this epoch. In modern times also, parallels exist between peaks and valleys in artistic and intellectual productivity and similar fluctuations in advances in medicine.

Response To A Cry

It seems to me, however, that there is another common thread running through all these examples of richness of achievement in medicine, and that surely this same thread is present in hard times as well as easy times. My suggestion is that each of these apogees of the art of medicine occurred when the artist-physicians responded best to the cry for help from their fellow-men.

Physicians always have explanations for their successes and failures. Patients, thank God, have usually recovered but usually for the wrong explanations or reasons. Even these wrong reasons have varied from culture to culture and time to time when one "proven" wrong reason has given way to another that has not yet reached its foolish senility. Still, patients continue to recover and more recover in response to the ministrations of the artist-healer than to others; else the medical artist-healer is replaced by another who in turn becomes the recognized artist and healer for the culture.

During this century we have seen the Homeopathic and Eclectic Physician give way to the so called "regular" under these influences. Thus it should always be.

Since the reasons vary and the results continue, the constant in the equation is the artist, the healer, whom we now call physician. This artist (as are all other artists) is an outgrowth of his culture and he explains and justifies his cures (art) as a result of these cultural influences. Yet he remains the constant ingredient in the formula, and ultimately his success depends on his insight into the therapeutic value of himself, and his willingness to respond effectively on a one to one basis to the cry for help of another human being.

I would propose that variations in the artist-physician's art as influenced by wealth and poverty are the same as in any other art form—Visual, Written, or Audio. That is, as wealth accumulates the artist has access to more technology and the affluent culture can spare more and more of its manpower resources for artistic endeavor, including medical endeavor.

Any population which elects to become a group for whatever reason — military conquest, geographic location, genetic background, etc. — has certain basic needs defined simplistically as food, clothing, and shelter. These basic needs are related to self-preservation and species survival.

If such a population is to continue,

at some point security and sufficiency in these basic needs must be reached. Affluence may be defined as the time in which this population has excess resources to meet these basic needs; the level of affluence is a measure of the degree of excess resources.

When this condition exists, cultural development begins, to meet what are perceived by the population as further needs. These in fact represent further conscious or unconscious efforts to improve the state of man and include government, personal, and property rights, the Arts, etc. Anthropological studies indicate that among the earliest needs perceived is the service of the artist-healer.

When resources continue to accumulate, more and more of these resources can be devoted to the various art forms with the result that improvement in technology and expansion in numbers of artists becomes possible. A productive period comparable to earlier eras of achievement is manifest now. Culture thrives and medicine and the artists of this discipline thrive, just as do the writers, painters, and actors. Yet there is always the epilogue to the story. This highly desired affluent state invariably deteriorates in one place to be rekindled in another leaving behind the artist and the remnants of his art.

Is it possible that man, once he has met these desired and perceived needs while in the affluent state, nostalgically views his new state as undesirable and longs for more natural environments and more human intimacy? Is this occurring in so called developed nations at the present time? Is this essence lost with affluence? It has been proposed that technology when allowed to flourish unchecked becomes the master and the technician the slave.

It is my contention that the artist is the constant and that the application of himself is the essence of his art. I would like to further propose that primary care may well be a response to the existential cry for help from modern affluent man — for an Artist, a Healer, a Primary Care Physician who can and will respond with purpose, courage, and effective support to other human beings.

Recovery From Outside Forces

Doctors always believe that they know the reason why patients recover and that these recoveries are attributable to outside forces — in today's medicine, usually to technological and chemical modes of treatment. Yet as Dr. Grey Dimond, Provost for Health Sciences, University of Missouri-Kansas City School of Medicine, has pointed out, many of the advances of current medicine, from antibiotics to heart and vessel surgery to renal dialysis, were absent from the curriculum when he and many of us were in medical school because these development were not yet available.

If we conclude from the rapidity of scientific and engineering development that training today's medical students for the technological specifics of tomorrow's medicine is just about impossible, then education in the basic enduring role of the healer becomes even more important. For physician and patient alike, the swift obsolesence of each new cycle of medical school curricula in the late twentieth century may help to facilitate return to what men and women have repeatedly sought — direct continuing contact and communication with the common denominator in all healing, the artist-physician himself.

". . . In modern times, parallels exist between peaks and valleys in artistic and intellectual productivity and similar fluctuations in advances in medicine. There is another common thread running through all these examples of richness of achievement in medicine, surely this same thread is present in hard times as well as easy times . . . each of these apogees of the art of medicine occurred when the artist-physicians responded best to the cry for help from their fellow-men . . . "

Adapted from a speech entitled "Culture and Society: Culture and Poverty; Culture and Richness" given at the Sixth World Conference of WONCA (World Organization of National Colleges and Academies of General Practitioners/Family Physicians), Mexico City, November 6, 1974.

BIBLIOGRAPHY

Breckinridge, James D.: The Schools of Salerno - Medical and Artistic. JAMA 216, No. 1, April 5, 1971.

Clendening, Logan: The Source Book Of Medical History. Dover Publications, Inc., New York.

Dimond, E. Grey, M.D.: Courage Beyond Science. JAMA 236: 2085-2088, November 1, 1976.

Durant, Will and Durant, Ariel: The Lessons Of History. Simon and Schuster, New York, 1968.

Durant, Will: The Story of Philosophy. Simon and Schuster, New York, 1953.

Ekman, Paul and Friesen, Wallace V.: Constants Across Cultures in the Face of Emotion. J Pers Soc Psychol 17: 124-129, 1971.

Garrison, Fielding H.: An Introduction To The History of Medicine. W. B. Saunders, Philadelphia, 1929.

Kennedy, Donald A.: Perceptions of Illness and Healing. Soc. Sci Med 7: 787-805, 1973.

McWhinney, I. R.: The Foundations of Family Medicine. Canad Fam Phys, April 1969.

Robinson, Victor: The Story of Medicine. New Home Library, New York, 1943, Copyrighted 1931.

Skinner, B. F.: Beyond Freedom and Dignity. Bantam Books, 1971.

Torrey, E. Fuller: What Western Psychotherapists Can Learn From Witchdoctors. Amer J Orthopsychiat 42, January 1972.

Toynbee, Arnold J.: A Study of History. Oxford University Press, E. C. 4, Ahmen House, London, 1939.

Wangensteen, Owen H., Wangensteen, Sarah D. and Klinger, Charles F.: Wound Management of Ambroise Pare and Dominique Larrey, Great French Military Surgeons of the 16th and 19th Centuries. Bull Hist XLVI, No. 3, May-June.

LETTERS

Blatantly Anti-Semitic

Editor, The Journal:

I strongly protest the publication of the article "The Physical Suffering of Christ" by Riley Lumpkin, M.D., in the Medical Association *Journal* of March, 1978.

This article is blatantly anti-Semitic, containing numerous references as to how the Jews killed Christ, a "fact" which is certainly open to dispute according to numerous historians.

There are also a number of other points of Dr. Lumpkin's faith which are cited in the article. I certainly do not wish to get into a debate over matters of faith with Dr. Lumpkin — each man is certainly entitled to his own beliefs. What I am against is the inclusion in a medical journal of an article that is half full of religious assumptions. I do not believe that the *Journal* of our Medical Association is the appropriate forum for articles dealing with religion.

I also assume that the members of our association who do not share Dr. Lumpkin's religious beliefs would object to our journal supplying a medium for their expression. Dr. Lumpkin's article belongs in a religious magazine and certainly not in a scientific and social journal, receiving financial support from individuals not sharing the religious beliefs of the article, or not desiring matters of faith to be written about in a non-sectarian association's journal.

Phillip R. Robinson, M.D.
Montgomery

Inaccurate, Prejudicial

Editor, The Journal:

I wish to take issue with you over the publication in the March, 1978, *Journal* of the article by Dr. Riley Lumpkin. A medical journal should be a forum for the discussion of medicine and medically related topics. Certainly, medical history is a valid area for the *Journal's* exploration. But Dr. Lumpkin's article, though replete with historical facts, is most certainly a treatise on religion. As such it has no place in your, or any other, medical journal.

That Dr. Lumpkin's piece contains inaccurate, prejudicial comments of this type commonly seen and heard early in Hitler's reign is a topic for another forum. What is important here is that this type of article ever saw light in the pages of your *Journal.*

Robert T. Brown, M.D.
Birmingham

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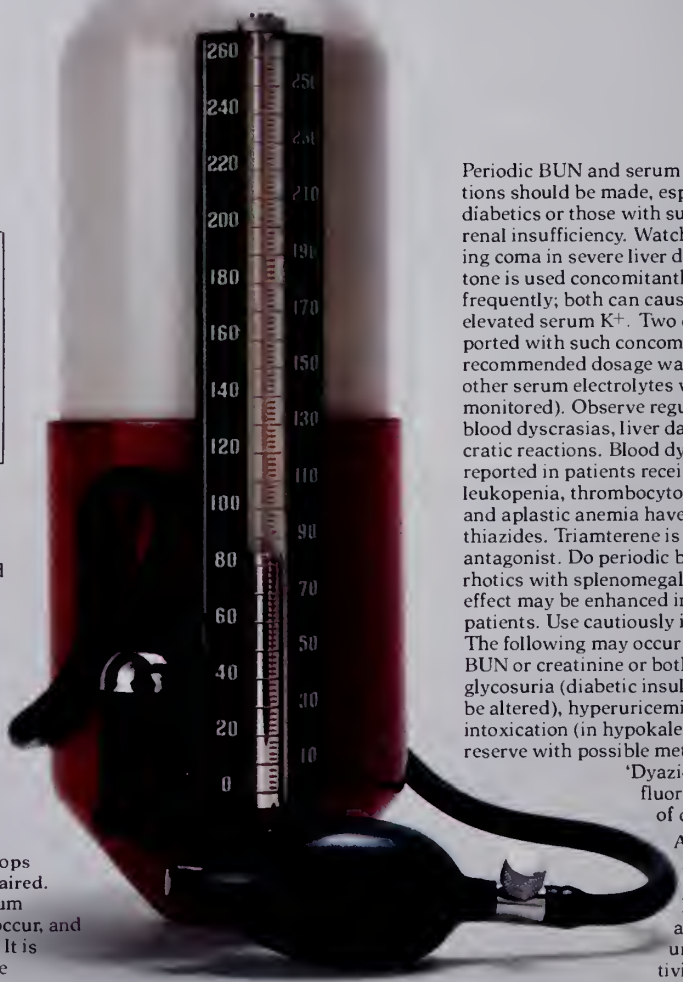
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* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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ST. LOUIS BLUES:

THE MEDICAL DOLLAR

If there was a dominant theme to the St. Louis AMA House of Delegates meeting in June it was, predictably, cost containment.

This became a kind of self-fulfilling prophecy in December when, at the winter interim meeting of the House in Chicago, the lengthy report of the AMA-appointed National Commission on the Cost of Medical Care was presented.

Although the Commission was, once appointed, free-standing and autonomous, the question of whether its conclusions and 48 specific recommendations would be embraced as AMA policy was thrown to the House of Delegates in June.

- In last month's Journal, Ron E. Henderson, M.D., writing as a physician in private practice and as chairman of the newly appointed ad hoc committee on health costs in Alabama, introduced the problem anew with an overview of the background of the present alarm over rising medical costs.

- And, in this issue, MASA President Hiliary H. Henderson Jr., M.D., speaks to the same subject in his monthly message.

The truth of Voltaire's phrase may have become applicable: cost containment is an idea whose time has come.

At least the Carter Administration thinks so, have having just adopted a more and more publicly stated policy that national health insurance would lead the country to bankruptcy unless the rising of costs of health care can be containment.

Language Not Debatable

Since the Cost Commission's report, and the language in it, were its own, these could not be changed in St. Louis. The House of Delegates endorsed a general statement of substantial agreement with the *objective* of the Commission, saying:

"The House...believes that the one hope for cost containment in the provision of health care lies in strengthening price consciousness in the health care marketplace."

In doing so, the House formally recognized that physicians, other providers, consumers and interested groups are going to give attention to the cost of that care for some time. If the emphasis has shifted from the quality of care to the cost of it, physicians obviously have a large stake in striking an equitable balance that will not seriously damage the older priority.

The Commission's initial recommendations dealt with consumer price consciousness, and the House endorsed them. The principles covered in these recommendations included giving employees a periodic informed choice among various health care coverage options, giving employees economic incentives to shop for cost-effective health care coverage, and providing for employee participation in cost decisions through co-insurance and deductibles.

Market Competition

Related actions endorsed the concept of providing consumers with easily understood written information about competing health care plans, certification of insurers at the state level, providing fair market competition and evaluation for provider and insurance systems, including HMOs, individual practice arrangements, and other options.

A number of Commission recommendations dealt with the assessment of quality in medical care and the use of standards and guidelines for care. In general, the House asked that the Board of Trustees and the Councils look again at the subject and submit recommendations for consideration in the future.

The measurement of quality of care has been a difficult and elusive issue in medicine, and the Board's studies may give some clue as to whether this measurement can be accomplished in a manner satisfactory to both physicians and patients.

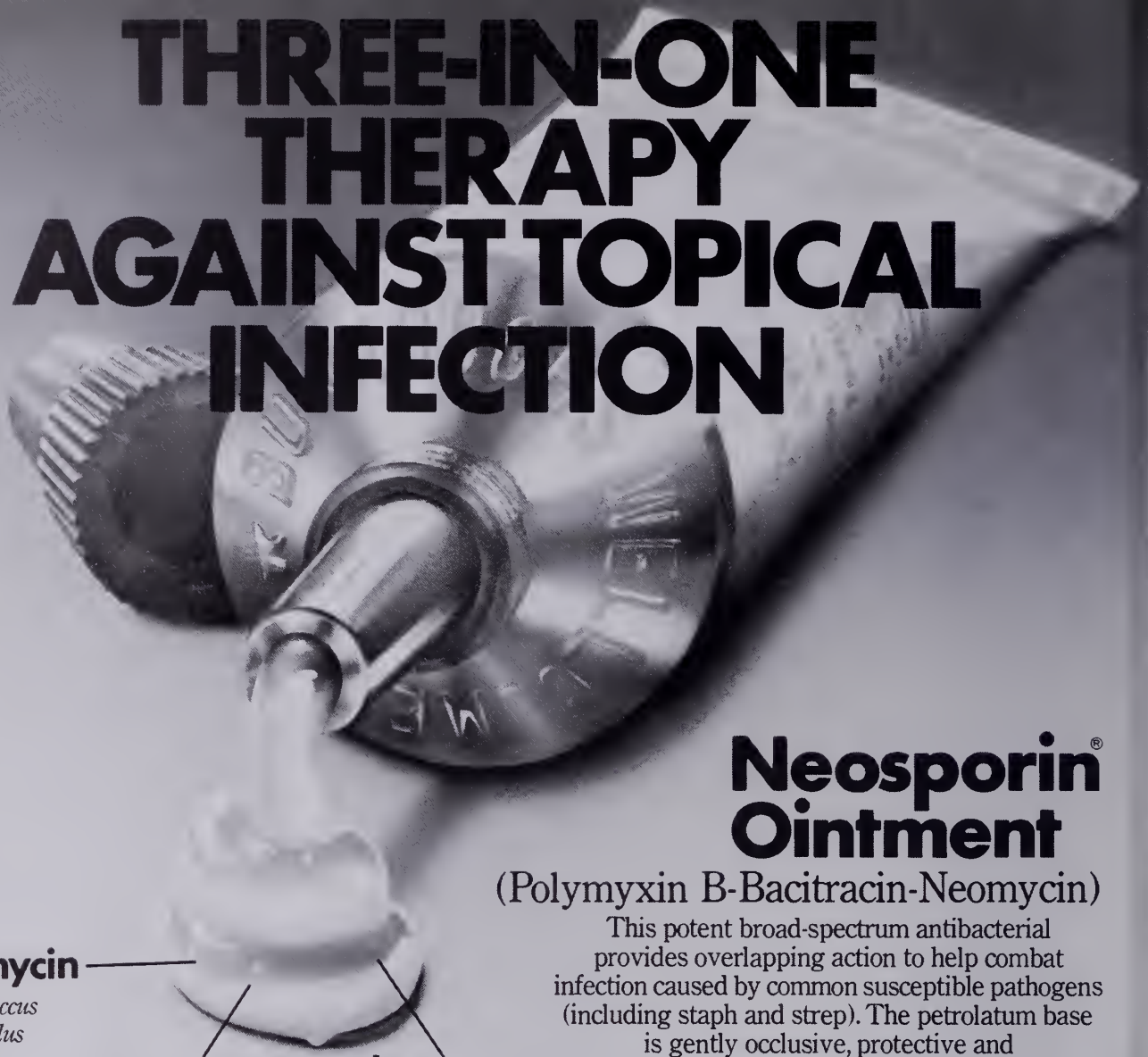
Aside from the endorsement of a recommendation that supported the Voluntary Effort Program, the House also endorsed Commission recommendations urging experimentation with prospectively determined rates and other payment systems that can make the administration of health facilities more cost conscious.

In general, the House asked for a moratorium on new regulations and a thorough evaluation of existing regulations.

Although it is impossible to capsule the lengthy Commission's report and the comments from the Board of Trustees, the above highlights should at least establish the mood and the need for further study reflected in the House's actions.

CONTINUED ON PAGE 24

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ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Family Practice

Its Promise, Performance, Prospects And Problems

By WILLIAM R. WILLARD, M.D.

It is with a sense of humility that I present the annual Jerome Cochran Lecture at this meeting of the Medical Association of the State of Alabama. I am giving this lecture in honor of a distinguished and beloved Alabama physician who served the Medical College of Alabama from 1868-79, first as Professor of Chemistry then as Chairman of the Department of Public Health and Jurisprudence.

He then served as secretary of this Association for four years during which time he developed a plan for the constitution of this organization and a plan for the public health structure of the state.

His public health plan placed the responsibility for public health upon the State Medical Association and its constituent, county medical societies, and the plan was enacted into law by the State Legislature. Dr. Cochran then served as the first State Health Officer from 1879 until his death in 1896. These were significant and enduring accomplishments, both for the physicians of Alabama and for the people of this State.

My humility is heightened as I read the names of the distinguished physicians who have preceded me to this platform every year since 1899 except for two, 1900 and 1901, when Dr. William Osler, the selected lecturer, could not be present.

Its Promise

My assignment is to discuss medical education, particularly the family practice movement, its promise, performance, prospects and problems.

The emergence of the modern family practice movement is a significant development. This movement is now a little more than a decade old, although its origins go back much further. The statistics have shown clearly, over a long period of time, the marked and steady decline in the numbers and percentage of physicians who classify themselves as general or family practitioners.

You are familiar with the reasons for the decline of general practice: (1) the rise of specialization identified with the first specialty board in 1918; (2) the tremendous growth of research after World War II with its consequences of specialization and subspecialization and the full-time investigator/teacher as the role model for medical students and residents; (3) the social changes resulting in a technological society and a population migration to urban centers.

Two beliefs, widely held by most people, prevailed for nearly a quarter of a century after World War II:

1) that biomedical research offered the solution for most of our major health problems; and 2) that producing more physicians would solve the physician manpower problem. As a consequence of these beliefs, the nation investigated huge sums of public and private money in creating the world's greatest biomedical research program, which has markedly changed the character of medical education and practice. It also invested large sums of money to build more medical schools and to enlarge the enrollment in existing schools.

By the mid 1960s it became apparent that neither of these measures, important and valuable as they were, would solve the health care delivery problems of the nation. Two major issues had not been addressed, viz.: (1) the balance between specialists and subspecialists versus generalists; and (2) the geographic maldistribution of physicians.

The American Academy of General Practice, organized in 1947, was perhaps the first organization to note with alarm the prevailing trends. The general practitioners constituted the main resource for providing medical care to small towns and rural America but, if the prevailing trends continued much longer, the general practitioner would become an extinct species. Perhaps for self-preservation but also for the public interest, the Academy became an articulate and aggressive organization, trying desperately to stem the tide. It wanted particularly a role in influencing the educational processes of the medical school and constituted something of a nuisance to the medical education establishment of that time.

The Council on Medical Education and Hospitals of the American Medical Association also was concerned. In 1958 it issued an excellent report which dealt with graduate medical education for general practice, i.e., the internship and residency. This report led to the establishment of two-year internships and residency programs for general practice. However, these programs did not attract many medical school graduates; instead, they continued to go into the specialties and subspecialties. With some exceptions, a physician became a general practitioner because he could not afford to—or, perhaps, could not qualify for—training as a specialist.

Issue of the 1960s

Thus, by the mid 1960s the problem of health care delivery became a major national concern, not just for the public but also for the medical profession. Three major studies were undertaken, one by a citizen group which published a report entitled "Health is a Community Affair," and



THE JEROME COCHRAN LECTURE

presented before the Medical Association of the State of Alabama at its annual meeting in Huntsville on April 21, 1978, by William R. Willard, M.D., Dean, College of Community Health Sciences, The University of Alabama.

two by the Council on Medical Education of the American Medical Association. The first of these was the Millis Commission Report entitled "Graduate Medical Education" and the second was a report by the Ad Hoc Committee on Education for Family Practice entitled "Meeting the Challenge of Family Practice."

These three reports, although each was commissioned for a different purpose, were released at about the same time in 1966 and had one thing in common. They all called for a new kind of physician. This new kind of physician was given a different name in each of the three reports, viz., a personal physician, a primary physician or a family physician, but his functions as described in the three reports were essentially the same.

The definition of this new kind of physician is one of function rather than of content. To avoid a seeming bias for family practice, I have elected to use in this paper a definition by an internist, Dr. Robert Petersdorf, Chairman of the Department of Medicine at the University of Washington. He wrote that, "A primary care physician can be defined as one who: (a) is the physician of first contact for the patient; (b) makes the initial assessment and attempts to solve as many of a patient's problems as possible; (c) coordinates the remainder of the health care team, including ancillary health care personnel as well as consultants that are necessary in dealing with a patient's problems; (d) provides continued contact with the patient and often his or her family; (e) acts as a patient's advisor and confidant; and (f) assumes continued responsibility for his/her care." The primary care or family physician emphasizes ambulatory medicine in his practice, prevention, rehabilitation, and care of the chronically ill. He is recognized as a potential leader in his community in assessing its health care needs and resources and in assuming leadership with other community leaders in meeting these needs.

Content and Function

Dr. I. R. McWhiney, Chairman of a Department of Family Practice in Canada, indicates the difficulties in attempting to define family medicine in terms of content rather than function. He writes as follows:

"Most disciplines in medicine are derived from a number of others. Surgery, for example, draws knowledge from anatomy, pathology, physiology, and biochemistry. In defining a discipline, however, it is not enough to list all the subjects in which it has its roots. These disciplines must be melted down, amalgamated, and molded into a new form which is vitally different from each of its ingredients."

All three of the reports to which I referred earlier left their mark. The one with which I am most familiar is that of the Ad Hoc Committee on Education for Family Practice, a Committee on which I was privileged to serve. This report has been republished three times and it appears now that a fourth reprinting will be required. It has had an important impact for two major reasons; the first was its timing, perhaps a fortuitous matter. The public and the profession recognized the need for change and were ready. The second was that the report considered all aspects involved in family practice, not just the graduate training programs. It considered the characteristics of applicants to medical school, the medical education program itself, the graduate or residency training program for family medicine, the structure of the medical school, specifically as it related to a department or division of family medicine, the need for suitable faculty role models, the character of the clinical experience which students and residents should have, the environment of practice, the financing of programs for family practice, and the status of the field, specifically the need for a specialty board for family medicine.

Inappropriate Functions

The Committee recognized that the functions of a family physician could be assumed by physicians in other specialties but that, in general, these functions were not being assumed and that the training programs in other specialties were not designed for these functions and usually were not appropriate for them. Hence, although the subject matter of the curriculum was not unique, the philosophy and the role was quite different and the amalgam of component parts of a new and different educational program should produce a different type of physician. Family medicine is often described as a specialty of breadth rather than of depth.

The experience of working with the Ad Hoc Committee and the dynamics involved were most interesting. The Committee was appointed by the Council on Medical Education with three members from the Council, three from and acceptable to the Association of American Medical Colleges, and three from and acceptable from the then named American Academy of

General Practice. Over a two-year period, the Committee met for 13 two-day working sessions with much staff work between meetings. The representatives of the three organizations were mutually suspicious of each other at first and the attendance at meetings was somewhat sporadic for a brief period, until the late Dr. Amos Johnson, a member from the American Academy of General Practice, "laid down the law" so forcefully that all participants felt responsible and accountable for the assignments given them. There were no further attendance problem.

Respect In Disagreement

During the discussions that ensued, persons who originally were miles apart philosophically, learned to understand and respect the opinion of others. At the conclusion of the work, the Committee had an unusually high esprit de corps, a mutual liking and respect among the members, and they believed that if all physicians in the United States could have been privileged to participate in such a committee, there would no longer be problems within the profession in understanding family practice or the need for it. All of the Committee members felt that, with the publication of the report, they had left a significant landmark on American medicine. Interestingly enough, three of the nine members of the Committee eventually entered academic family medicine and also interestingly enough, three of the members now live in Alabama whereas only one lived in this State while the Committee was active.

Soon after the report was completed, it was approved by the House of Delegates of the American Medical Association with the strong support of the American Academy of General Practice. A new specialty board in family practice was authorized. The specialty board issue had been a controversial one within the Academy of General Practice at the time the Ad Hoc Committee was appointed, but as Committee deliberations proceeded. The Academy reached the point where it was unanimously and strongly supportive of the creation of a specialty board.

The initial proposal for a specialty board, if adopted, would have resulted in a board composed entirely of family physicians. However, at the insistence of the Council on Medical Education, it was agreed that at least three members of the board would be appointed from other major specialties. The three from these other specialties have always been most supportive of family practice, I understand, and have made important contributions to the work of the American Board of Family Practice.

At the prodding of state chapters of the American Academy of General Practice, or of the American Academy of Family Physicians, as it is now called, several state legislatures mandated departments of family medicine in state supported schools. The Academy felt that medical schools were dragging their feet in establishing family medicine programs. All educators, even those sympathetic to family practice, regretted the fact that the Academy attempted, with some success, to legislate medical school curriculum and organization. However, legislation together with public concern certainly sensitized medical schools to the family practice movement.

Meantime, the Council on Medical Education of the American Medical Association, working with the Academy of Family Physicians, adopted the "Essentials of an Approved Residency Program for Family Practice" and created a Residency Review Committee to help accredit family practice residency programs.

Thus, the stage was set for the launching of educational programs for a new type of family physician.

Progress

Last fall (1977) the Ad Hoc Committee on Education for Family Practice held a reunion meeting in Las Vegas after the annual meeting of the American Academy of Family Physicians. No one had asked the Committee to meet and it had no charge. However, the members wanted to meet again, to review their recommendations in the light of subsequent developments and to speculate on the future. The progress made by the family practice movement is summarized in the report of that meeting which will be published soon in the Journal of the American Medical Association.

The Ad Hoc Committee was gratified to observe the remarkable progress which had been made. The growth in modern education programs for family practice began from an essentially zero base in 1969 (three years after publication of "Meeting the Challenge of Family Practice"). By mid 1977, the number of approved family practice residency programs had increased from 0-325, the number of residency positions from 0-5,421 and the number of first year residents from 0-2,043. The appeal of the residency program to medical graduates is evident by a 94% fill rate in first year positions in 1977. During the same period, over 80% of the United States medical schools had developed departments or divisions of family practice, whereas virtually none existed previously.

In spite of this impressive progress, the graduates of new programs are not yet sufficient in number to have had a major impact upon the number of family physicians in practice. 1976 was the first time in many years that there was an increase in the number of physicians who reported that they were engaged in general or family practice.

The goal of the American Academy of Family Physicians to have 25% of the United States graduates of medical schools enter a family practice residency program, a goal which the Ad Hoc Committee endorsed at its Las Vegas meeting, is still some years from attainment. Although the number of medical school graduates entering family practice residency programs has increased, so also has the size of medical schools' graduating classes. Thus, the percentage of graduates entering family practice programs has increased only moderately from 12% in 1975 to 15% in 1977. To achieve a goal of 25%

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of medical school graduates entering a family practice residency will require, among other things, a doubling of the present number of residency positions available in the United States.

There is encouraging evidence that the graduates of the family practice programs are really going into family practice. According to a survey by the American Academy of Family Physicians, as of June 1976, 75-80% of the then 2,212 graduates of family practice residency programs were in family practice, excluding those in military service. Furthermore, most of them were going into smaller towns and underserved areas, thus fulfilling one of the major concerns responsible for the family practice movement. 75% have entered practice in communities of 100,000 or less and 50% in communities of 30,000 or less.

Promoting the Movement

The American Academy of Family Physicians has played an important role in promoting and supporting the family practice movement in a variety of ways. The residency assistance program (RAP) in family practice and the "hot line" for program directors in family practice to aid in matching residency candidates to unfilled positions has been particularly valuable, as has the Academy's analysis and distribution of facts and figures concerning residency programs and the practice location of graduating residents. Furthermore, it has sponsored many workshops to help teachers of family medicine improve their skills.

The growth in the field also has been marked by the naturation of three other organizational members of the family practice group: the American Board of Family Practice, the Residency Review Committee for Family Practice, the Residency Review Committee for Family Practice, and the Society of Teachers of Family Medicine. Each has a well-defined role to play in bringing family practice to the level of other, more traditional specialties in medicine. Resulting from the leadership of the American Academy of Family Physicians and the Specialty Board in Family Practice, three notable "firsts" have been achieved: (1) all diplomats have passed the Specialty Board examination; there are no "grandfathers;" (2) re-examination after six years is mandatory to retain Specialty Certification; and (3) a new type of practice-audit examination has been developed for recertification.

The apparent success of the family practice movement, along with other social forces, has had an interesting byproduct in forcing several other specialties to re-examine their role, their training programs, and in some cases to resolve an identity crisis.

Role and Identity

The issue of role and identity in internal medicine has been articulated most clearly by Dr. Robert Petersdorf. The internists have considered themselves as primary care physicians for the adult population and studies have shown that 70-80% of the average general internist's time is spent in delivering primary care. The general internist's role is becoming less and less that of a consultant, which role is being taken over by subspecialists, and is becoming more and more that of a primary care physician.

Dr. Petersdorf observed that family medicine has had to synthesize a new type of training program based in large measure on existing disciplines. Medicine, on the other hand, and one can include pediatrics, has moved inexorably toward primary care while a variety of subspecialties have metastasized from the parent specialty. Dr. Petersdorf believes that the average academic medical center is training too few general internists and more medical subspecialists than are needed.

Dr. Petersdorf notes that efforts of internists to meet this problem by certifying general internists after three years of training while requiring additional training for subspecialists. However, programs in general medicine are usually inadequate for a primary care internist, in his opinion. There is not sufficient emphasis on ambulatory medicine and rarely is there a suitable model of practice for the training of residents. There are few role model general internists on the faculty and these are generally overshadowed by stronger personalities in the subspecialties who have most of the money and power and achieve the academic rewards. The general internists on medical school faculties, where they exist, often are finding academic life difficult and unrewarding. Until this is changed, there is little likelihood that general internal medicine will have the kind of faculty it needs. It is perhaps more than coincidental that the problems Dr. Petersdorf identifies are exactly the same problems considered important by the Ad Hoc Committee on Education for Family Practice.

Dr. Petersdorf then goes on to say that to make the required changes will require the slaughter of some sacred cows. He claims the notion that every subspecialist in medicine is a competent general internist is not true and never was. He also notes that the skills required by a primary care internist, i.e., general internist, differ from those of subspecialists. He goes on to say:

"Unless the primary care internist is defined as clearly as is the cardiologist or gastroenterologist, unless he or she is distinguished clearly from the many subspecialists, and unless medical schools produce enough of these physicians to clearly put them in the majority of physicians practicing internal medicine, internal medicine will abrogate its traditional responsibility to care for the whole patient and will become a loose confederation of subspecialists who pay homage to an organ or a system of organs."

Re-Examination

The same stype of introspection and re-examination of role and training programs are going on in many other specialties today. These are some of the interesting byproducts, precipitated in large measure by the family practice movement and the social forces which produced it.

In general, there are no major problems between family medicine and the other specialties at the practice level. There is too much work for everyone to do. There is a diminishing group of vocal general practitioners who believe that family physicians should be allowed to do major surgery, and in some places there are problems of hospital privileges for family physicians. These are not major problems and will be resolved in time.

However, there is one area where rivalry is often, but fortunately not universally, found and that is in the academic medical center. Professors have a natural desire to attract the best students available to reproduce their kind. Furthermore, the value systems of many who work full-time in the academic world and have become leaders in their specialties, were developed in an era when research in the biomedical sciences was king. In the inevitable competition for budget, space, power, and students to full residency positions, the general internist is usually at a distinct disadvantage. Dr. Petersdorf has alluded to this situation when he cites the difficulties of attracting general internists to a medical school faculty. Similarly, it has been difficult for family practice to gain a foothold and to have its place in the academic sun in some schools, although there are others where family practice has been welcomed. In these fortunate settings, where there has been a good cooperation among the specialties, family medicine has prospered. In other settings, it is having a most difficult time.

Prospects and Problems

The phenomenal growth and success of the family practice movement in one short decade would seem to augur well for the future. I believe it does, but there are some critical problems ahead.

As indicated, family medicine has encountered problems of acceptance. The debates centered originally around the question of whether or not there was a unique body of knowledge which only the family physician could be expected to possess. The answer clearly is no; it is the function that is unique and even that is, or can be, shared with internists, pediatricians, obstetricians and gynecologists, and sometimes other specialists.

Family medicine must achieve true academic credibility for survival and this can be done in large part by producing new knowledge, i.e., by research. Research that is especially relevant for family medicine centers around the many problems in the delivery of health care. For example, one recent study indicated that continuing care by one physician is more economical and more satisfying to both patient and physician than care by a series of physicians.

One must be tolerant in judging family medicine at this time by its research productivity. For the most part, full-time faculty in family medicine have been recruited from practice. They have had no experience in research. As the national biomedical research developed in the 1950s and 60s, it became obvious that it was essential to train and support investigators and this, in fact, was done. The same is likely to be true in family medicine.

As with any new discipline, the first research efforts are usually descriptive and a number of papers have been written defining the content of a family physician's practice. This is useful knowledge in analyzing medical practice and developing family practice curricula. The increasing use of the problem oriented record and the computer, open up vast areas for research in family medicine. Several of the leading family medicine training programs have developed a consortium with common record forms and coding for the computer, thus permitting a number of cooperative and comparative studies.

Thus, a beginning has been made in family medicine to develop new knowledge but it is only a beginning. This beginning can be accelerated if in each program, the residents are expected to produce at least one paper relevant to his interests and those of family medicine.

Some observers are concerned about the quality of the family medicine programs. They have grown so rapidly that they have outstripped the availability of good faculty. Training pro-

grams for faculty are just beginning to be developed and do not begin to meet the need. The critics point out that many programs have only one or two full-time faculty members and depend upon the voluntary help of practicing physicians for their teaching. No one in family medicine minimizes the value and importance of the practicing physician as a teacher, but experience has shown that full-time faculty is necessary for curriculum planning, supervision and administration of the program. Also, it is fair to ask: "Do those programs really teach the new attitudes and philosophy of comprehensive, continuing, and personalized care, or are the programs more like a refurbished, rotating internship emphasizing acute and episodic care?" Probably there are both.

If one accepts the goal of 4,000 first-year positions for family medicine, then it follows that the goal should be even higher if family medicine is to meet its obligations to help other specialty training programs. With the abolition of the internship, many specialty residency programs, such as psychiatry and the "non-bedded specialties" are requiring a basic first year in which the residents have clinical experience similar to the old rotating or mixed internship. Virtually everyone agrees that this is a wise foundation for those specialties, but where can residents obtain this basic first year of training?

Many of us who were involved in the decision to do away with the freestanding internship (a measure recommended by the Millis Commission in its report "Graduate Medical Education") visualized that this basic year should be provided in a family practice program. Furthermore, there will always be some residents not really settled on their career choice who take a family medicine residency and then wish to transfer to another specialty after a year. The conclusion is that family practice residency programs should have more first year positions available than second and third year positions and should expect to lose a fraction of their first year residents.

Although every residency director would like to see all of his residents finish his program, this should not be an expectation in family practice programs. Probably 25%, and maybe more, of the first year places should be made available to those who need a broad clinical experience before entering another type of residency program.

Even if the positions were available, it would be necessary to have strong, vigorous, academically credible medical school departments if 4,000 medical school graduates are to be attracted to family medicine. Otherwise, many medical students who might have selected family medicine will choose other fields because they have never been exposed to family medicine nor to a family physician role model as a teacher.

The Ad Hoc Committee, at its reunion meeting in Las Vegas, noted that its original report stated that time with a practicing physician as a preceptor might be a valuable adjunct to the training program. The Committee now feels it should be a required part of the program. It follows, of course, that preceptors should be carefully selected and supervised. As family medicine develops in Alabama, there will be an increasing need for more practicing physicians to serve as preceptors. It can be a rewarding experience for the medical students, residents and preceptors.

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Detriment To Care

Dr. Petersdorf, in his thoughtful analysis of both internal medicine and family medicine, warned family medicine about the danger of what he called "academic acromegaly." The family physician, because of the breadth of his field, which spans virtually all other specialty disciplines to some extent, may try to learn, or think he knows, more than it is possible for any one person to absorb. The result may be, in such cases, that the family physician will not appreciate his limitations, and will not use his other specialty colleagues as consultants or refer his patient when he should. In this case the desirable, healthy relationship between specialties will not be fostered but instead will be damaged to the detriment of good patient care.

Finally, we must consider an important and practical issue for medical education. Financing of medical education is always a most difficult and complex matter, not well understood by physicians who are not involved in medical school administration. Like people, because they are made up of people, medical schools go where the money is, and the character of their programs and of the institution itself is strongly influenced by the conditions attendant to its financing.

It is obvious that the national research program profoundly changed the character and priorities of medical schools. The Ad Hoc Committee recognized this in its original report and believed that the national need for family physicians was comparable to that for biomedical research and deserved the same priority of funding. Although significant federal and state funding for family medicine has been provided, the picture among the states is uneven. Some states have done nothing and federal funding has been

on a project basis, lacking in continuity and magnitude. Alabama has done reasonably well, but much more support will be needed if the programs now in the process of development are to achieve real quality and stature. In short, the whole field of family medicine faces a continuing financial problem. This is not unique in medical education, but as a lusty, growing infant, the needs of family medicine are relatively great.

We could go on indefinitely with this discussion, but let me summarize by saying:

Family medicine was born out of public dissatisfaction with the medical care available and the need for a new kind of physician.

Family medicine especially, but some of the other disciplines, are responding by training a new kind of physician to render primary care.

Progress in family medicine has been dramatic and the promise for the future is good.

However, there are real problems which must be solved if the promise is to be realized. These are the need for:

- The continued growth, doubling or even trippling the present output of the family physician.
- The establishment of academic credibility through contributions of new knowledge.
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Richard L. Dempsey, M.D.
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C. Doyle Haynes, M.D., F.A.C.S.

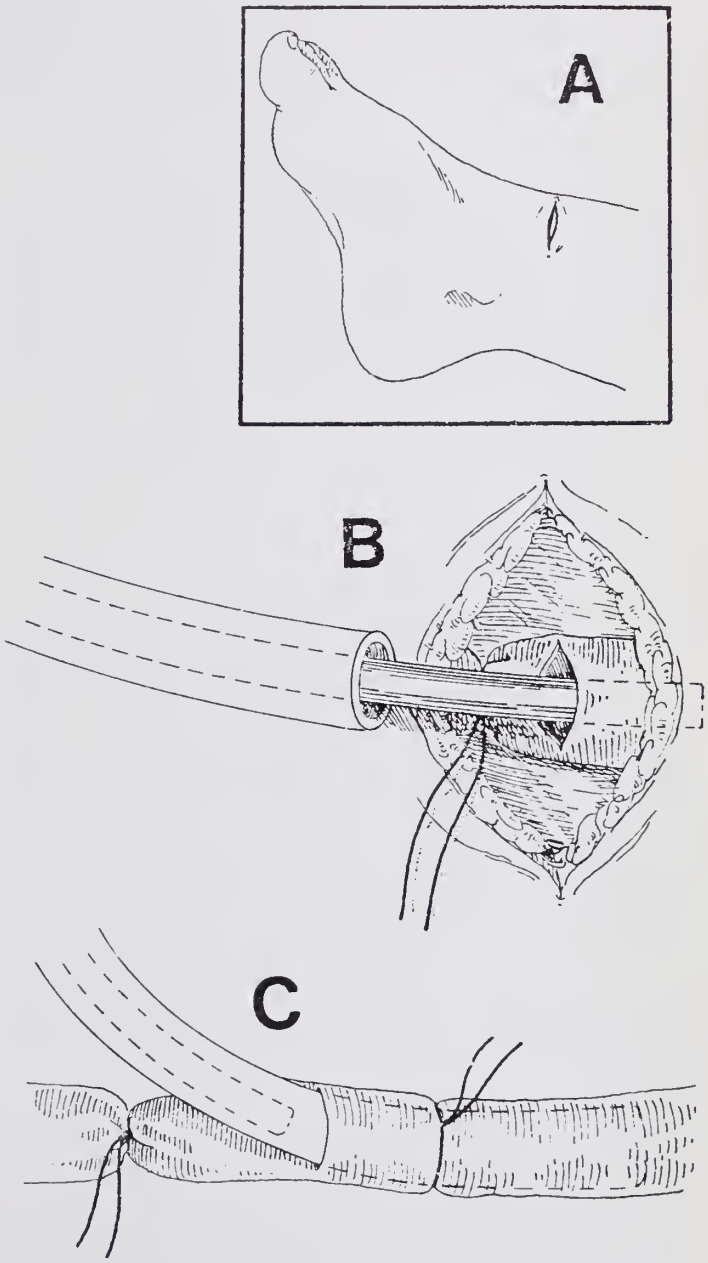
Most venous cutdowns can be accomplished without difficulty when the vein size is adequate for the usual surgical manipulation involving cannulation of the vein. Occasionally, however, in the restless patient or where vein size is small, as in pediatric cutdowns, the cannulation of the vein can be extremely difficult.

Recent experience has shown that the difficult cannulation can be facilitated by the aid of a process similar to the technique used in arterial catheterization, as described as Seldinger.[1] The readily available Bard-Intracath (with needle gauges of 19, 17, or 14 and catheter lengths of 8, 12, or 24 inches, as appropriate) provides the necessary material. The metal guidewire should initially be removed from the plastic catheter which is then shortened by one to two inches. The wire is put back into the plastic catheter with the end protruding. It is then introduced into the vein, after which the plastic cannula is inserted over the guidewire. (Figure 1) At this point, the guide is simply removed, and the catheter is advanced as necessary.

For a more desirable skin exit the catheter may be tunneled subcutaneously with the Intracath needle for one to two inches from the wound margin and brought out at a separate opening from the wound itself.

1. Seldinger, S. I. "Catheter Replacement of the Needle in Percutaneous Arteriorgraphy: A New Technique" Acta Radiol 39, 369. 1953.

Drs. Dempsey, Webb and Haynes are members of the Surgical Clinic, Inc., Opelika, Ala. Additionally, Dr. Haynes is Clinical Associate Professor of Surgery, Emory University School of Medicine.



The cutdown in a child is usually made in the leg utilizing the greater saphenous vein (A). The guide wire being inserted into the vein is protruding out of the end of the cut off catheter (B). The catheter is advanced and the guide wire removed (C).

Splenic Abscess In Acute Leukemia: Report Of Two Cases

James F. Smith, Jr., M.D.,
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and
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Abstract

Two febrile patients with acute leukemia were found, by spleen scan in one and at autopsy in the other, to have splenic abscesses in association with bacteremia. These abscesses seemed to serve as a nidus for bacteremia in these patients and ultimately led to their demise. The potential value of radioisotope scanning and the possible need for splenectomy in such febrile leukemic patients is discussed.

Introduction

The diagnosis and treatment of fever and infection in patients with acute leukemia remain major management problems. With the development of more effective cytotoxic regimens, making life-threatening hemorrhage less prominent, infections have become the most common cause of death in this disease. Although Candida albicans, Pneumocystis carinii, and certain viruses are increasingly important, Staphylococcus aureus, Klebsiella species, E. coli and Pseudomonas aeruginosa remain the most common agents causing mortality[6]. The usual sources of infection are the lung, urinary tract, perirectal area and blood stream seeding from the gut.

Febrile episodes in myelosuppressed patients are commonplace. In the presence of granulocytopenia, the potential for fulminating infection is great, mandating an aggressive diagnostic approach with prompt and frequently arbitrary treatment. Efforts to identify the responsible agent or site of infection are unsuccessful in many patients[2,3,5,9,10].

Splenic abscess formation in these patients presumably results from bacteremia or fungemia, and other metastatic sites of infection are usually obvious[1,4,7]. However, splenic abscess has not been emphasized as a site of infection and cause of fever in acute leukemia. We recently observed two patients who appeared to have as their sole source of continuing infection, abscess formation in the spleen and liver in one patient and in the spleen alone in the other. The purpose of this report is to describe these cases and to demonstrate the value of liver-spleen scanning in the diagnostic evaluation of selected patients.

Case Report No. 1

A 62-year-old black male presented with shortness of breath, easy fatigability, dizziness and left upper quadrant abdominal pain for one month. In the previous two years, he had three episodes of joint pain and swelling. He had a 20-pound weight loss during the past year. Physical examination revealed midepigastric and left upper quadrant tenderness with a questionably palpable splenic tip. Initial laboratory data revealed a hematocrit of 30%, white blood count 76,000 cells per cmm with 73% polymorphonuclear cells, 10% bands, 2% metamyelocytes, 2% myelocytes, 1% blasts and a platelet count of 184,000 cells per cmm. Leukocyte alkaline phosphatase score was 183; serum B-12, 4,972 pg/ml. A chest x-ray showed marked elevation of the left hemdiaphragm and a question-

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able left pleural effusion. Bone marrow examination revealed a markedly hypercellular specimen with granulocytic hyperplasia and increased numbers of immature elements. A chromosome analysis was normal. A lymph node biopsy specimen showed leukemic infiltration. Liver-spleen scan and gallium scan demonstrated a filling defect in the upper portion of the spleen, suggesting either abscess, tumor or infarct. Numerous cultures of blood, urine and bone marrow for tuberculosis, other bacteria, and fungi were negative. Serologic tests for fungi were negative. A diagnosis of atypical chronic myelogenous leukemia was made; busulfan therapy resulted in partial symptomatic and hematological improvement. He continued to have left upper quadrant tenderness.

During September 1974, he developed a blastic transformation of his leukemia and was treated with daunorubicin and cytosine arabinoside. His course was complicated by marrow hypoplasia, E. coli septicemia treated successfully with cephalothin, gentamicin and carbenicillin and severe liver function abnormalities (bilirubin 15 mg/dl and alkaline phosphatase 280 I.U. but a normal SGOT). The etiology of the hepatic derangement remained unclear. A liver scan was not performed during that admission to the hospital. At discharge, his bilirubin was 3.1 mg/dl and serum alkaline phosphatase 209 I. U. As an outpatient, he had a leukocytosis (50,000 cells/cmm) with a predominance of mature granulocytes, and was treated at intervals with cytosine arabinoside and thioguanine. Chest x-rays repeatedly demonstrated an elevated left hemidiaphragm believed to be secondary to splenomegaly.

In January 1975, he developed severe right upper quadrant pain. Physical exam revealed a tachycardia of 130 per minute with respirations of 20 and temperature of 102 degrees F. Right lower lobe pulmonary rales were present without signs of consolidation. The liver was palpable 5 centimeters below the right costal margin. The spleen was barely palpable at the left costal margin; it was firm and slightly tender. Laboratory data included a hematocrit of 30%, white blood count 44,600 cells per cmm with 70% polymorphonuclear leukocytes, 8% bands, 15% monocytes, 7% lymphocytes and a platelet count of 27,000 cells per cmm. The bilirubin was 0.6 mg/dl with a direct fraction of .3 mg/dl, alkaline phosphatase 138 I.U., and SGOT 49 I.U. The chest x-ray was unchanged from previous exams.

The liver-spleen scan was interpreted as showing moderate hepatomegaly and poorly defined areas of decreased uptake; the spleen was "normal" on scan. Routine cultures of blood, sputum and urine were negative. The bone marrow was hypercellular and contained 33% blasts. Lumbar puncture revealed no cells, no organisms, a glucose of 166 mg/dl and a protein of 62 mg/dl. Therapy with azacytidine[11] for his leukemia was instituted. The next day he became dyspneic and then died suddenly.

At autopsy, leukemic infiltrates were found in the hepatic portal spaces, bone marrow and spleen. Focal granulomata (stains were negative for AFB and fungi) were found in the lungs, liver and kidneys. The spleen weighted 1550 gm, and contained a large abscess (3 x 6 cm) in its inferior portion. No phathogen was identified.

Case Report No. 2

A 31-year-old white male was admitted to the hospital for treatment of acute granulocytic leukemia during November 1974. For six months prior to admission, he had had chronic furunculosis. In early November 1974, he noticed fatigue and gingival bleeding. He had a history of nephrolithiasis, but no fever, chills, sweating or symptoms of diabetes.

Physical exam revealed a temperature of 99.0° F. Scars of previous furuncles were observed with active lesions on the trunk. His teeth were carious, but without gingival infection. There was a Grade 2/6 systolic ejection murmur in the aortic area, without radiation. The liver was palpable 1 centimeter below the right costal margin with an overall span of 11 centimeters to percussion.

The spleen was palpable 2 centimeters below the left costal margin and was slightly tender.

Laboratory tests included a hematocrit of 26%, white blood count 2,700 cells per cmm, with 54% blasts, some containing Auer rods; 26% lymphocytes, 11% polymorphonuclear leukocytes and 9% eosinophils; platelet count was 119,000 cells per cmm. Renal and liver function tests were within normal limits, as were urinalysis, electrocardiogram and chest x-ray. Culture of one furuncle grew Staphylococcus aureus. His leukemia was treated with beta-deoxythioguanosine[8] over a 3½ month period with induction of a complete remission. Because of his skin infections, he was placed initially on a 10 day course of oral cloxacillin. On

December 19th, because of a fever of 102° F, cultures were again obtained and he was placed on nafcillin, gentamicin and carbenicillin until January 3, 1975. No obvious site of infection was present and cultures were unrevealing. On January 5th, fever recurred and therapy with cephalothin and gentamicin was administered daily until January 17th. Blood cultures grew Klebsiella species sensitive to both drugs. His fever varied from 99° to 101° F with occasionally higher elevations. Blood cultures on January 25th grew Klebsiella sensitive to cephalothin, gentamicin, chloramphenicol, tetracycline and doxycycline. Chloramphenicol was used briefly without response. On February 4th, a liver-spleen scan was obtained and revealed filling defects in the spleen and liver. With intravenuous doxycycline, the fever promptly ceased and a repeat scan one week later showed improvement. He was maintained on oral doxycycline through the rest of his illness with focal defects remaining in the liver and spleen; these were stable on follow-up scans. He repeatedly refused splenectomy.

His leukemia was maintained in remission with periodic beta-deoxythioguanosine therapy as an outpatient, until August 1975 when a relapse occurred. Therapy with cytosine arabinoside and doxorubicin (Adriamycin (R)) resulted in severe marrow aplasia. He became febrile again. A repeat liver-spleen scan was stable, but pseudomonas pneumonia and sepsis led to death.

Permission for an autopsy was not obtained.

Discussion

In patients with acute leukemia, the leading major causes of fever include infections, drug fever, transfusion reactions, and largely by exclusion, the leukemia itself.

These two patients show that the spleen may serve as a primary and continuing focus of infection. Symptoms and signs related to splenic infection were few in number and mild in intensity in these patients. The spleen was palpable in both instances and was believed to be enlarged secondary to the leukemia. Patient No. 1 had, on chest x-ray, a markedly elevated left hemidiaphram, but had a normal spleen scan. Both cultures were positive in both patients. In spite of in vitro sensitivity to drugs used in patient No. 2, who had an antemortem diagnosis of splenic abscesses, control of the bacteremia required high dose intravenous antibiotic therapy initially, coupled with prolonged oral suppressive therapy.

Radioisotope scanning of the liver and spleen should be considered in febrile patients with acute leukemia. Whether splenectomy in patients with abscesses would be tolerated and useful without a remission of the leukemia, remains to be evaluated.

References available upon request.

ST. LOUIS BLUES: THE MEDICAL DOLLAR

CONTINUED FROM PAGE 11

Medical Ethics

Another major issue before the St. Louis session was a proposed revision in to the Principles of Medical Ethics. In the main, the revisions have been described as both an updating of the language and a response to legal restrictions on the health professions that have been written into state laws over the years.

Some delegates expressed concern over the interpretation that could be given some portions of the revised Principles, and the House very wisely voted to refer the revisions to an ad hoc committee of the House for study and report in December. While this referral delays enactment of the revisions for a year, the importance of the Principles justifies the careful study of all physicians.

The House also signaled a newly guarded attitude toward any national health insurance bill carrying the AMA's endorsement. Before any new bill is filed in the next Congress, or the old one reintroduced, the House directed, the Board of Trustees should clearly state the need for it and give Delegates ample notice of such consideration.

The present bill in Congress will die at the end of the year if not enacted. Congress, it has been widely reported, is in no mood to pass any NHI bill in the face of substantial costs and a rising federal deficit.

In this connection, the House also called for a constitutional amendment that would outlaw federal deficit spending.

Representing MASA in St. Louis were: Delegates P. W. Burleson, M.D., O. Emfinger, M.D., and W. E. White, M.D., and Alternate Delegate Julius Michaelson, M.D. □

Towards Cost Effectiveness

A Position Paper
By Samuel Eichold, M.D.

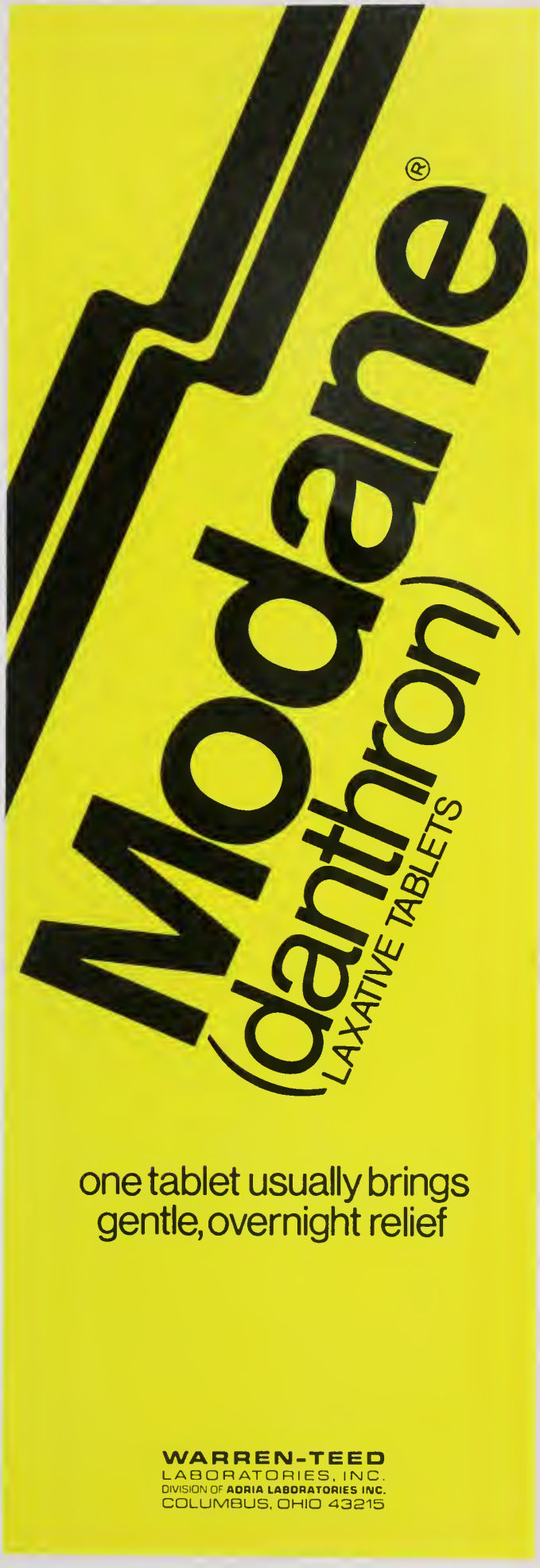
Without data to substantuate the statement, it would appear to concerned physicians that, "a cause for overuse of the hospital and the subsequent rise in the cost of delivery of health care can be laid at the feet of the third-party payors for health care."

They specify that the medical needs, even for the removal of an ingrown toenail, requires hospitalization for payment by the insuror. There are few exceptions to this rule. Would it be reasonable to expect the practicing physicians in Alabama to unite and deny services to companies which write such a policy? Patients would be provided care on patient responsibility for payment. We need to make it possible for those in need of diagnostic and therapeutic attention from the physician to be afforded appropriate treatment on an outpatient basis wherever possible.

To be sure, it costs the insurance company nothing for the added cost of requiring hospitalization since it is included in the premium. It would be ever so beneficial in reducing the cost of the delivery of health care, to stipulate that the physician provide care in the manner deemed medically appropriate. The physician must be relieved of the burden of compliance, when it is obvious that hospitalization is unwarranted except to meet terms of the policy. It may add only to the cost, and not the quality of care.

We have relegated our responsibility to the writer of policies who does not take into account our being made reprehensible for the sins of mandatory hospitalization and rising costs. Terms of the contract for health insurance are written by those who bear no responsibility to the public nor to the Congress for cost containment. Our refusal to service contracts that are written without consideration of the role of the physician, can be realistic and effective.

Are we without leadership or courage, or both? □





CME Technology, An Update

By George D. Oetting, Ed.D.
Director of Education

Meet Harvey (pictured above), the Cardiology Patient Simulator developed at the University of Miami School of Medicine.

Beneath his life-size torso and rubberized skin is a 6'x3'x3' control box full of all kinds of whirring brass wheels, electronic circuitry and other fascinating gadgetry, which reminded me of the automatons described in Victorian conjuring books.

Harvey can be yours for only about $94,000!

With the use of special cassettes, Harvey realistically simulates bedside findings of many cardiac disease states. Synchronized bilateral arterial (carotid, brachial, radial and femoral) and jugular venous pulsations, percordial movements, respiration, blood pressure and auscultation in the four classic acoustic areas are presented. Even complex acoustic events vary with respiration when appropriate. Additional call-up slide programs are available to display background data for each disease state.

Harvey was just one of many interesting scientific exhibits at the recent AMA convention in St. Louis. Since this will be the last time that the AMA business and scientific sessions will be held simultaneously at the same location, I thought MASA members would be interested in an update on CME technology.

Naturally, such instructional mannikins as Harvey could only be feasibly used at a large teaching center. However, there were many other types of equipment and technology shown which may become available to the average Alabama physician in the future.

Satellites

CME transmitted by educational satellite is already a reality in some sections of the U.S. Live CME programs were beamed from St. Louis while the scientific sessions were in progress. Physicians at many locations were able to view these presentations and also interact with course instructions via telephone lines. So far, the satellite "footprint" hasn't touched Alabama, but it undoubtedly will in future transmissions.

Video Disc

Also coming down the pike, a little further down, is the videodisc which at present is only in the prototype stage (manufactured in France by Thomson-CSF). These discs resemble a clear plastic version of the old 78 RPM records. However, the analogy stops there, because the discs can store 54,000 frames (pictures) on a 30-minute slide. Each frame can be viewed individually on a regular TV screen, or the disc can be speeded up so it resembles a motion picture.

There is little disc wear and tear since it is "read" by laser beams rather than some sort of needle. Speed of random access is also an advantage since any frame can be called up in less than 5 seconds—a big improvement over movies and video tapes.

Naturally, the initial production costs are high and include a $1,000 expense to create a master disc. However, once this master disc starts reproducing copies, these are cheap — about 60 cents per ½ hour disc in large quantities.

When in production, units to "play" these discs are expected to cost about the same as videocassette players now on the market. These units can also be connected to local computer systems and create very sophisticated instructional programs.

Computer Assisted Instruction

Speaking of computers, leads into other equipment viewed at this session. These ranged from a set-up at the AMA booth with the fancy title "Interactive Multimedial Self-Instruction" to commercial CRT terminal screens connected to a company computer by telephone lines.

The type of educational interaction varied, but they all involved the physician viewing information presented on a screen, making some decisions and then inputting these decisions by touching the screen or using a keyboard. The computer then evaluated the decisions and provided more information, either correcting mistakes or going on to new data.

Some of the equipment appeared to be too complicated for use except in centralized learning centers, close to large computers; others may prove to be practical for use in the home or office.

Physicians Radio Network

An interesting "freebie" for MASA members was discovered at the booth of the Physicians Radio Network (PRN), 15 Columbus Circle, New York, NY 10023 (Toll-Free Number 800/223-6598). They will send physicians a *free* private frequency radio which broadcasts CME programs and medical news on a special frequency 24 hours a day. Advertisements pay for the broadcast costs.

In talking with their representative, it appears that this is currently available only in the Birmingham area; however, they do plan to expand this to other parts of Alabama. Please write or call them if interested.

Final Personal Thoughts

Some of the technology I saw will probably never get much beyond being a laboratory toy for some educational psychologist. Other equipment will eventually be available to physicians in smaller communities either at their office or home.

It appears that this will probably be done by hook-up with existing technology such as telephone lines, personal TV sets or mini-computers already installed at the office or home for other purposes such as bookkeeping.

If technology does develop this way, it will certainly give the physician greater flexibility in participating in CME—it can be done at a time and location convenient to the individual.

Time is the test of all things.

1954
1978



BRIEF SUMMARY

Indications: Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. May be used in the treatment of cardiac arrhythmias due to digitalis intoxication.

Contraindications: Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.

Precautions: Potassium intoxication by oral administration rarely occurs in patients with normal kidney function, however, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentrations of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

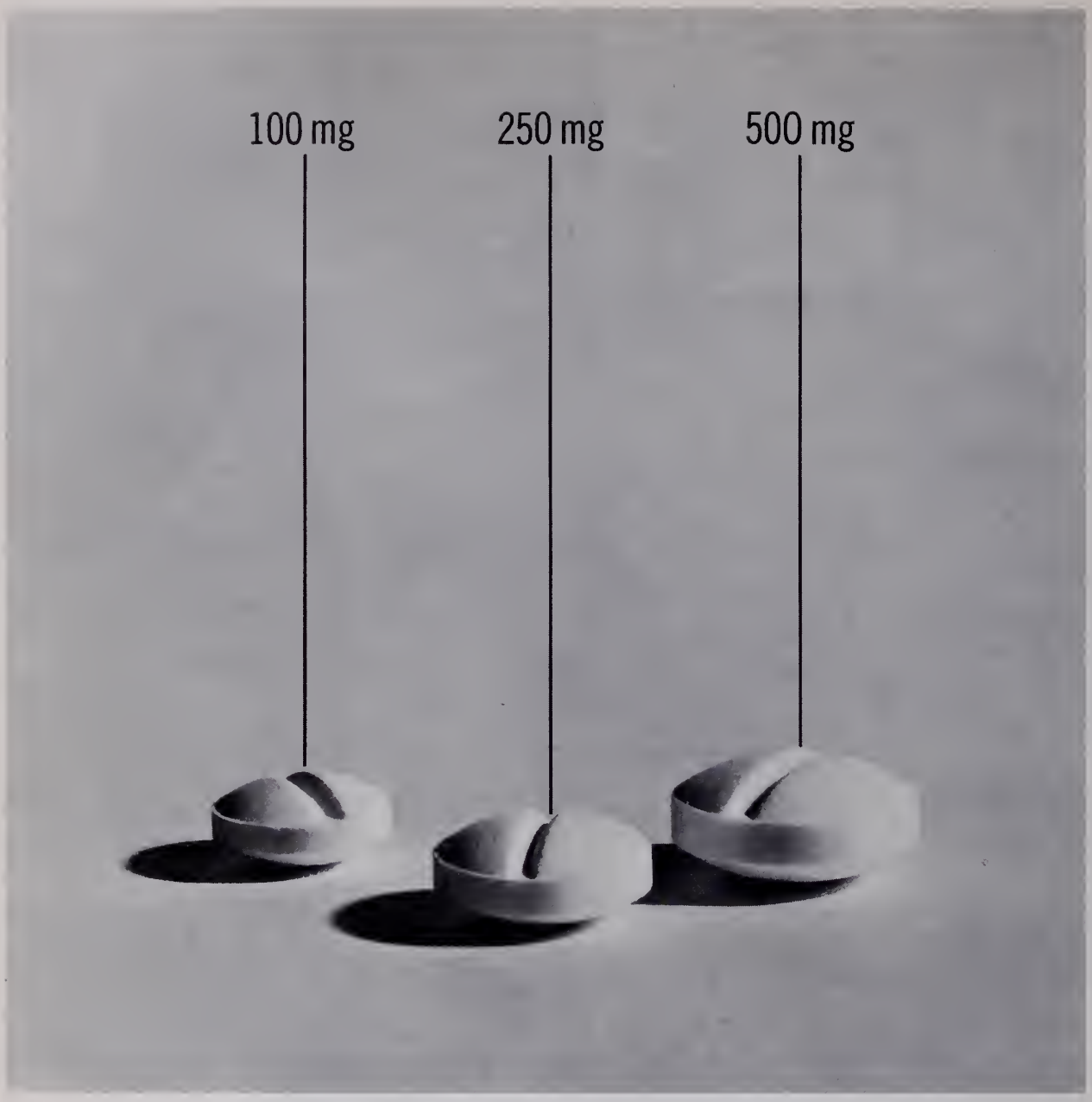
In hypokalemic states, especially in patients on a low-salt diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation.

Adverse Reactions: Nausea, vomiting, diarrhea, and abdominal discomfort have been reported. The most severe adverse effect is hyperkalemia.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications". Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

Kaon® Elixir
(potassium gluconate)
20 mEq per 15 ml

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LABORATORIES, INC.
DIVISION OF **AORIA LABORATORIES INC.**
COLUMBUS, OHIO 43215



Tolinase®
tolazamide, Upjohn

Please contact your Upjohn representative for additional product information.

Upjohn

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PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

EMERGENCY MEDICINE: Age 30; Alabama 1974; National Board Certified; seeking practice in emergency room, single specialty group, institutionally based or partnership. Available July 1978. LW-11620.

FAMILY PRACTICE: Age 52; St. Louis University, 1961; National Board Certified; seeking practice in multi-specialty group, single specialty group or industrial. Available October 1978. LW-11662.

GENERAL PRACTICE/FAMILY PRACTICE: Age 57; University of Kansas, 1950; Will be American Board Eligible in 1978 in Family Practice; seeking practice in administrative, institutionally based or public health. Available September 1978. LW-10786.

GENERAL PRACTICE/GENERAL SURGEON: Age 57; Marquette University, 1951; seeking practice in solo, partnership or emergency room. Available July 1978. LW-11524.

INTERNAL MEDICINE: Age 29; George Washington University, 1974; National Board certified; will be American Board eligible 1977; seeking single specialty group or partnership. Available July 1978. LW-09526.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03

INTERNAL MEDICINE: Age 32; Tulane, 1971; American Board Certified in 1974 in Internal Medicine; seeking practice in town of 25,000 to 50,000 population. Available at a negotiable time. LW-0500.

INTERNAL MEDICINE/PULMONARY DISEASES: Age 55; Southwestern Medical, 1948; American Board Certified in Internal Medicine; seeking practice in school health, institutionally based, or public health. Available April 1979. LW-11941.

OPHTHALMOLOGY: Age 39; Rush Medical University, 1975; National Board Certified; Will be American Board Eligible in 1978 in Ophthalmology; seeking practice in solo, partnership, or single specialty group. Available July 1978. LW-11980.

OPHTHALMOLOGY: Age 33; University of Alabama, 1971; American Board Certified; seeking private, partnership or group, industrial or institutional preferably in the Mobile area with a population of 25,000 or more. Available July 1978. LW-200.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

ORTHOPEDIC SURGEON: Age 45; University of Mississippi 1961; American Board certified; seeking practice in medium or large city. Available July 1978. LW-700

PEDIATRICS: Age 30; Downstate, 1972; American Board Certified in Pediatrics; seeking practice in institutional, public health, school, clinic or emergency room preferably a town near Phenix City. Available July 1978. LW-0501.

ORTHOPEDIC SURGEON: Age 31; Med. College of Georgia 1972; seeking practice in town of 50,000 plus population. Available August 1979. LW-701

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PEDIATRICS: Age 27; University of Texas Southwestern, 1975; National Board Certified; seeking partnership, single specialty group or solo. Available July 1978. LW-10873.

PSYCHIATRY: Age 54; University of Cincinnati, 1951; American Board Eligible in Psychiatry; seeking general, specialty, or assistant or associate practice in town of 100,000 plus population preferably Montgomery. Available this summer. LW-0502.

SURGEON: Age 35; Medical University of South Carolina, 1968; seeking practice in specialty in a town with a population of 50,000 - 200,000. Available in the fall of 1978. LW-0503.

SURGEON, GENERAL/FAMILY PRACTICE: Age 32; Univ. of Mississippi 1973; will be American Board eligible in 1978 in General Surgery; seeking single specialty or multi-specialty group or partnership. Available October 1978. LW-08593

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400

UROLOGY: Age 30; Yale Univ. 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800

UROLOGY: Age 30; University of Mississippi, 73; seeking practice in town greater than 20,000 population. Available July 1, 1978. LW-014.

PHYSICIANS WANTED (Opportunities for Practice)

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and larger cities contains a progressive 74 bed hospital. Ample opporltunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17.

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital provileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PHYSICIAN WANTED to take over busy practice in General Medicine in convenient location of Tuscaloosa. PW-05178

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on May 17, 1978:

- Confirmed extensions for three outstanding individuals for employment beyond age 70 for one year.
- Was advised of changes in the membership of the Statewide Health Coordinating Council from 43 to 47 members adding three consumers and two providers, an optometrist and chiropractor.
- Received a summary of the legislative action from the last regular session and notice of the Health Department Budget which provides less funds than the previous year for the operation of the Department. The Committee was advised by the State Health Officer that economy measures would have to be instituted and details would be furnished at a later meeting.
- The revised Rules and Regulations for Public Water Supplies were unanimously adopted and replace regulations adopted April 16, 1953. These new regulations have been made to comply with P.L. 93-523, the Federal Safe Drinking Water Act.
- Approved the change in license of Medicenter of America, Birmingham, from Specialized Hospital (recuperative) to Skilled Nursing Home (extended Care Facility).
- Received drafts of Skilled and Unskilled Nursing Home Rules, Regualtions and Standards for study and comment.
- Approved the initial issuance of Assurance of Need for nine facilities.
- Gave favorable findings and recommendations to Brookwood Medical Center, Birmingham, for an ambulatory care center addition.
- Concurred with favorable findings and recommendations for a project to relocate and expand the renal transplant unit to the Spain Tower for the University of Alabama Kidney Transplant Unit, Birmingham.
- Approved a project for replacement of 22 beds and renovation of 61 beds at Community Hospital in Birmingham.
- Received a status report on the Certificate of Need Program. ☐

Brief Summary of Prescribing Information
Combined TEGOPEN® (cloxacillin sodium)
Capsules and Oral Solution
For complete information, consult Official Package Circular. (12) TEGOPEN 9/11/75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q.6h.

Children: 50 mg./Kg./day in equally divided doses q.6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B.: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

Supplied: Capsules—250 mg. in bottles of 100, 500 mg. in bottles of 100. Oral Solution—125 mg./5 ml. in 100 ml. and 200 ml. bottles.

BRISTOL®
BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201



IN THE MOBILE AREA, STAPH RESISTANCE HAS NOW REACHED 93%.*

*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

WHEN YOU CAN'T RULE OUT STAPH, CONSIDER

TEGOPEN®
(cloxacillin sodium)

..."THE PENICILLIN OF TODAY"

- Effective against nonpenicillinase-producing staphylococci, beta-hemolytic streptococci, and pneumococci.†

†NOTE: The choice of Tegopen should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates that the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semisynthetic penicillin. The clinical significance of *in vitro* data is unknown.

- 10 times more active against strep than staph.
- Well absorbed from the G.I. tract.‡

‡Maximum absorption occurs when Tegopen is taken on an empty stomach, preferably 1-2 hrs. before meals.



Please see brief summary for prescribing information.

The Physician Advisor, The Review Coordinator, And The Medical Staff

By William J. Perry, M.D.
Physician Advisor, Pineview Hospital,
Hartselle, Alabama

Presented in part, Alabama Medical Review Conference, "PSRO—A Second Look," Birmingham, Alabama, 1978.

With enactment of the PSRO program in 1972, as an amendment to the Social Security Act, physician responsibilities to their patients, reviewers, and government agencies under Titles V, XVIII and XIX became a legal manifest.

As much as we may currently believe it will "erode" our freedom of practice, it behooves us as physicians to make a special effort to comply with the regulations to assure the quality and appropriate utilization of health care services and to accept local peer review to improve that quality of care many legislators feel necessary.

There exist, however, groups and individuals in medical practice who have strong personal feelings about how one should run his business. These too should be respected. Their attitudes need be tempered, however, in light of the law. Fortunately for Alabama, compliance by the majority of physicians appears excellent, but for the few who show apathy for the program. Advisors and review coordinators will be an important link with the medical staffs of delegates and non-delegated hospitals.

The physician advisor, by virtue of his equally strong feelings that this program can work, and the review coordinators, with their qualifications and similar interest, offer assistance and a buffering capacity to clarify and smooth the legal path for these few unresponsive or apathetic physicians.

The physician advisor is a practicing physician facing the same legal problems and moral commitments in his own hospital. He must differ with some of his colleagues in having the conviction to pursue and the philosophy to express the intent of the program and be able and willing to transfer these qualities to his staff and co-workers.

The review coordinator must project these same attitudes to her contacts, yet maintaining a professional integrity that will prevent any short circuit of daily changes by the physician who continues to show disregard for the effort she is making in carrying out her delegated role.

The success of the program will depend greatly upon her abilities and responses to the daily criticisms of physicians and sometimes even to an administrator who looks with disfavor on this federal program and with special antagonism to those who are making an effort to help their staffs.

The biggest stumbling block rests in trying to instill these attitudes in terms that will not antagonize the sensitivities of the physician or have him feel that we have a government agency encroaching upon his private domain, particularly within a hospital province.

Many of these physicians violently indicate that the PSRO, and even the physician advisor, is a government agent trying to impose a cookbook pattern on their usual procedures, while, in reality, it is physicians in private practice reviewing the work of their colleagues.

I, for one, feel that the principal responsibillity for one segment of health care cost springs without a doubt from decisions that the physicians make, and I believe that no one can aruge with this thesis. If this is the case, then the physician, more than anyone else, has the greatest opportunity, and indeed a compelling responsibility, to promote "cost containment" and prudence in the use of health services.

Now that bit of moral philosophy has been expounded by numerous individuals. Volumes have been prepared from different government sources; but, more important, non-medical researchers working in an anti-medical atmosphere, feed these cold statistics to elected officials in a calculated manner that threatens the way I practice and the practice hopes of our children and eventually the type of care our future patients will receive under another system—in spite of the unrecognized good done by so many dedicated physicians in the past.

All this boils down to the fact that physicians do have great influence on patient behavior. I believe physicians have to accept a greater role in educating patients to the reality of health care economics and, in turn, the physician advisor must do so in his capacity.

If physicians would inform themselves realistically about the problem this country faces in the apparent escalation of health cost and then re-examine their own practice habits in light of this knowledge, we might produce results as fast as Congress expects.

We are being seriously criticized for lack of results. The boldest attitude we need take is a simple reminder by physicians to inform the patient or family that health care is never free. This might be in order when we hear, "Oh, my insurance will cover this," or "I can't go home today because I have no transporation," or "I have to rest, put me in the hospital."

What this amounts to is having a physician advisor or review coordinator who has the courage to express locally the federal regulations in such a manner that underscores the physician's responsibility to control cost, yet keep the quality of medical care at a level expected within this framework.

The physician must be willing to adjust some of his thinking processes in spite of those patterns that become ingrained by age, or position on the medical staff, or disposition, and without fear of lawsuit by families when it is necessary to suggest that further medical care or hospital admission under titles V, XVIII and XIX may not be necessary for that individual.

This type of projection of attitudes by a physician advisor and review coordinator within their own hospital is sometimes easier than by the casual visits to outlying non-delegated hospitals.

Now, some physicians will probably never respond in the fashion that seems most desirable but the review coordinators have already noticed, within the past several months,

that these same physicians are beginning to show concern about "cost containment" and consequent quality of medical care, including better documentation.

The truly significant end product, "cost containment" and quality of medical care, can be evaluated and I think will be evaluated appropriately in the months to come. I think it is unfair for editors to be critical of this program in the news media in that the physicians have not been able to hold down cost of hospital care or show measurable improvements in the quality of care.

This effort, in my mind, will take several months to become formulated sufficiently so that a definitive figure can be attributed to this new kind of process. The re-education of physicians to new doctrines does take time. We, as physicians, and those performing regulator functions as advisors and coordinators, are no different from political leaders who need to learn new legislative processes as they take office in our present administration.

Congress passed the legislation and expected results before the ink became dry; I am aware of the urgency of political fireballs to torpedo the program. I say let's give us a chance to work with medical staffs to reach these goals.

I also believe, without reservation, that as long as the physician continues to control this program, the problems everyone feared under this legal document will never occur. Participation in the PSRO program offers the physicians the best opportunity *today* to meet public accountability objectives while retaining control of their own profession.

This may not be the final or ultimate program, but the alternatives that I foresee are very unpalatable. Having personally observed and participated in the English system for two years, I wonder how a non-medical personality in our Federal Health System can become such an authority on an entirely unworkable, devastating medical system.

Unfortunately, when the news media again indicated that the mounting pressure from the White House on PSRO to show results climaxed in a warning that no more funds would be available, we again saw a drop in the general attitude of these same physicians in both types of hospitals, and this is understandable.

I think there are some individuals who would be happy to see the whole organization dumped, and, in blind hope, look for something else that would fit their complaints. If this does happen, some other directive less tolerable will be extended to the medical profession on a legal platter with glitterings of socialization and we will have little choice as to how we will perform in our future medical practice.

Those individuals who were borderline at the time of discussions relative to the advisability of continuing the PSRO program became less sensitive in resuming their new role and continued in their old fashion.

So with PSRO being funded again for another year, I believe that more physicians will realize that the opportunity they need to offer their own review coordinators and the physician advisor and consequently their medico-legal obligations will be their second and last chance.

It takes time to re-educate physicians relative to their need to impress patients about cost and equally important to encourage patients to accept part of this responsibility. In the past, regretfully, this has not been part of our training in medical schools. We are taught procedures relative to diseases; these are generally standard throughout most of the world, and they continue to be our standard procedures in practice.

As time moves on, however, techniques change and federal regulations become more complicated. Once again as norms become more standard, we as a physician must change our general attitude relative to these changes. This kind of insistence and instruction and suggestion produces the greatest flack from many physicians.

It is frustrating and somewhat humiliating to have physicians walk out of discussions when the advisor or coordinator may consider themselves making an honest effort to explain programs mandated by laws.

With all these attitudes that confront the physician advisor, somewhere and sometime he has to take a stand that will, without a doubt, encroach upon the toes of physicians, his colleagues in medicine. The law is specific. Government agencies are pressing to fulfill this legal document and its failure will be judged as a failure of the physician to carry out its mandate.

One finds with encouragement that some of these recalcitrant physicians with their bizarre admitting diagnoses, for which no criteria can be established, are settling upon justifiable admitting diagnoses in order to have them stand up to a physician reviewer, if for no other reason. Probably more important, they would not like to face the review coordinator who has to pursue this physician every day to have him justify the daily program of the patient.

The AMR coordinators are the important right hand of the physician advisor. They have need to possess the instinct, the personality, the courage and the intelligence to evaluate charts in light of physicians' remarks or in the absence of appropriate documentation.

They are the ones who have to pursue these same indifferent physicians in order to justify continued medical care under federally funded programs and it is they who take the remarks of indifferences from physicians.

The physician advisor or review coordinator may be an alien in your eyes as they approach your medical staff. They too need encouragement and support. Physicians everywhere should be aware of their responsibility to them, your patients and the law.

The regulations for hospital admission under this law will be carried out during the year with their assistance and that of the medical staffs in spite of the disinterest and apathy and antagonism of some physicians. As a physician advisor or AMR coordinator, a definite stand must be taken and medical judgment made now to the best of your abilities.

I believe that the State of Alabama is unusually blessed with the qualifications and attitudes of the present administrator of this program and physicians in delegated and non-delegated hospitals should take stock of themselves in this light and the direction that Dr. Richard Bliss and his staff wish this program to follow to the benefit of the practicing physician.

Peer review, at present, is only warm water to what I forsee in the future if evidence is not forthcoming of "cost containment" without jeopardy to the patient's health. Legislators that we elect with their congressional power they inherit are breathing on the door of non-physician review with all the potential of producing second-class medical care with the increased cost being paid by an already overburdened taxpayer. □

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Convention Notes

Mrs. Aubrey E. Terry
President, A-MASA

The 55th Annual Convention of the Auxiliary to the Medical Association of the State of Alabama is history.

The rich historical background of the city of Huntsville and the surrounding area, made an appropriate setting for the convention members to observe Madison County Medical Society's 100th birthday. Visits into the Twickenham section, with its lovely ante-bellum homes (more than 60 structures still in existence) gave us a glimpse into the history of past generations.

"John Hunt, for whom the city of Huntsville was named, came to what is now Madison County and built his log home just above the 'Big Spring' in 1805. After the creation of the county by proclamation of Gov. Robert Williams of the Mississippi Territory on December 13, 1808, provision was made by the Federal Government to have the land sold at public auction during August and September of 1809."[1]

LeRoy Pope bought the land surrounding the "Big Spring" and upon recommendation of a special commission this area was chosen as the county seat. At the suggestion of Pope, the new town was named Twickenham after the English home of Alexander Pope. Later the name was changed by a special act of the territorial legislature to Huntsville in honor of its first settler.

This year as usual we elected outstanding A-MASA officers for 1978-1979. They are: President-Elect: Mrs. Eugene Bradley, Centre; First Vice-President: Mrs. Rufus Lee, Dothan; District Vice-Presidents: NW: Mrs. Fred C. Ballard, Anniston; NW: Mrs. Ralph Braund, Sheffield; SE: Mrs. Lamar Miller, Dothan; SW: Mrs. Leland Edmonds, Mobile; Recording Secretary: Mrs. Charles Howell, Decatur; Treasurer: Mrs. J. E. Dunn, Jr., Wetumpka.

At our annual Thursday Auxiliary Luncheon an unusual and somewhat disturbing talk was given. Dr. Harold M. Voth, FACP, spoke to us on "The Family and the Future of America." Dr. Voth suggested our endurance for the future is definitely dependent upon parents assuming their proper family roles, by providing and projecting a feeling of security and stability in their homes and placing appropriate emphasis on dissimilar as well as similar roles to be assumed by our boys and girls.

Many interesting ideas and suggestions were imparted to us by National Auxiliary leaders — including those of Mrs. Chester Young, President of the American Medical Association Auxiliary. In the Memorial Service to honor our deceased members, Mrs. R. K. Wilson Sr. called our attention to a quote from a Club collect by Mary Stewart; "Let us take time for all things." She said, "Take time for friendships; for walks beneath the stars, for good books and music; take time for children, for laughter, for nature. Take time to love and be loved; take time for people, for solitude. Take time to give of yourselves, your talents, abilities, convictions. Take time for worship and prayer."

All of us certainly recognize the outstanding job done by Mrs. Everett Mosley and her Convention Committee, and the hospitality of Mrs. Bob Carlisle and the Madison County Medical Auxiliary. We also enjoyed the Friday Luncheon hosted by Morgan-Lawrence Auxiliary with recognition given to our past state and county presidents. My sincere appreciation to everyone whose time and effort contributed to making for an excellent convention and a worthwhile and enjoyable stay in Huntsville.



1. Glimpses into Ante-Bellum Homes, Huntsville, Alabama.

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Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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